



**GROUND RULES FOR THE
MANAGEMENT OF THE
FTSE ET50 INDEX**

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SECTION 1

1.0 INTRODUCTION

1.1 This paper sets out the Ground Rules for the management of the FTSE ET50 (Environmental Technology) Index. Copies of the Ground Rules are available from FTSE on the website www.ftse.com.

1.2 The FTSE Environmental Technology (ET) Index Series, along with the FTSE Environmental Opportunities (EO) Index Series, comprise the FTSE Environmental Markets family of indices. The Environmental Markets indices are designed to represent the performance of global companies ranked by full market capitalisation, i.e. before the application of any investability weighting, whose activities provide value-added solutions to environmental problems. This includes companies with business activities over a specified threshold (50% for ET; 20% for EO) that are covered in the FTSE Environmental Markets Classification System, which includes the six environmental sectors below:

- a) Renewable & Alternative Energy
- b) Energy Efficiency
- c) Water Infrastructure & Technologies
- d) Pollution Control
- e) Waste Management & Technologies
- f) Environmental Support Services

The assessment to establish whether a technology, service or business qualifies as being within these sectors will be carried out by Impax Asset Management, and approved by the independent FTSE Environmental Markets Advisory Committee.

1.3 Price Index values are calculated on a real time basis in US dollars. Total Return Index values are published at the end of each working day. The Total Return Index is based on ex-dividend adjustments. Currencies provided for both indices will include US Dollar, Euro, UK Pound Sterling and Japanese Yen on an end of day basis.

SECTION 2

2.0 STATUS OF INDEX

2.1 The FTSE ET50 Index is calculated in US Dollars and may exist in the following states.

a) **Firm**

- i) The index is being calculated during Official Market Hours (see Appendix A). No message will be displayed against the index value.
- ii) The Official Closing Price for FTSE ET50 Index will be the Exchange Official Closing Price for the Index.

b) **Closed**

The index has ceased all calculations for the day. The message 'CLOSE' will be displayed against the index value calculated by FTSE.

c) **Held**

During Official Market Hours, the index has exceeded pre-set operating parameters and the calculation has been suspended pending resolution of the problem. The message 'HELD' will be displayed against the last index value calculated by FTSE.

d) **Indicative**

If there is a system problem or situation in the market that is judged to affect the quality of the constituent prices at any time when the index is being calculated, the index will be declared indicative (e.g. normally where a 'fast market' exists in the equity market). The message 'IND' will be displayed against the index value calculated by FTSE.

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 ET50 Index are set out in Appendix A. Variations to the official hours of the indices will be published by FTSE.

2.3 US Dollar, Euro, UK Pound Sterling and Japanese Yen values will be calculated on an end-of-day basis.

SECTION 3

3.0 INDEX MANAGEMENT

3.1 FTSE International Limited (FTSE)

3.1.1 FTSE is responsible for the operation of the FTSE ET50 Index. FTSE will maintain records of the market capitalisation of all constituents and reserve list companies and will make changes to the constituents and their weightings in accordance with the Ground Rules. FTSE will carry out reviews and implement the resulting constituent changes as required by the Ground Rules.

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. The weightings of constituents in the real time indices shall be used in the calculation of the end of day indices.

3.1.3 FTSE is also be responsible for monitoring the performance of the FTSE ET50 Index throughout the day and will determine whether the status of the Index should be Firm, Held, Indicative or Part (see Rule 2.1).

3.2 Re-calculations

3.2.1 The FTSE ET50 Index is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE ET50 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 ET50 Index. They have been approved by the FTSE Environmental Markets Advisory Committee. 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 ET50 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 the FTSE Environmental Markets Advisory Committee (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.

3.4 FTSE Environmental Markets Advisory Committee

3.4.1 The purpose of the Committee is to consider and advise on matters relating to the FTSE ET50 Index and proposed amendments to the Ground Rules governing the management of the FTSE ET50 Index to ensure that best practice is used in the construction and ongoing management of the Index. In particular the Committee will:

SECTION 3

- a) ensure that appropriate global environmental technology standards are applied in the Ground Rules,
- b) advise on adjustments to the existing index methodology,
- c) oversee the ongoing management of the indices, corporate actions and changes to Ground Rules,
- d) advise on the design and methodology of new indices.

3.4.2 FTSE, in consultation with Impax, appoints the Chairman and members of the FTSE Environmental Markets Advisory Committee. The Chairman, will chair meetings of the Committee and will represent that Committee outside of meetings.

No member of the Advisory Committee is on the Advisory Committee to represent that member's employer but rather is there because of that person's specific expertise and to represent the interests of the industry generally.

3.4.3 A Secretary to the FTSE Environmental Markets Advisory Committee is appointed to support the work of the Committee.

3.4.4 A constituent or prospective constituent company (or advisor acting on behalf of the company) may appeal against the decisions of the FTSE Environmental Markets Advisory Committee on two grounds:

- a) that the Committee acted outside of the Ground Rules for the Management of the FTSE ET50 Index, or
- b) that the Committee, when reaching its decision, failed to take into consideration a substantial and material fact. A substantial and material fact is defined as a fact, which would have influenced the decision of the Committee if it had been considered.

A request for an appeal must be made in writing to the Secretary of the FTSE Environmental Markets Advisory Committee, within a reasonable time period from the announcement of the decisions. Appeals will be heard by a sub-committee appointed by the FTSE Environmental Markets Advisory Committee.

3.5 Amendments and Exceptions

3.5.1 In the event that the FTSE Environmental Markets Advisory Committee or any of those responsible for the operation and administration of the FTSE ET50 Index consider that an exception should be made to any of the Ground Rules, the issue must be brought to the attention of the Chairman of the FTSE Environmental Markets Advisory Committee, who will normally put the matter to the full FTSE Environmental Markets Advisory Committee for a decision. If, however, the matter is urgent, the Chairman is empowered to authorise an exception on behalf of the FTSE Environmental Markets Advisory Committee but must immediately notify, and subsequently refer the matter to the FTSE Environmental Markets Advisory Committee.

3.5.2 Where an exception is granted to the Ground Rules under Rule 3.5.1, it shall not be deemed to create a precedent for future decisions of the FTSE Environmental Markets Advisory Committee.

3.5.3 Changes to the Ground Rules can only be made by the FTSE Environmental Markets Advisory Committee.

3.5.4 Changes to the Ground Rules are announced after being approved by the FTSE Environmental Markets Advisory Committee's meeting and will be announced to the market at least three months prior to their implementation.

SECTION 4

4.0 INDEX CONSTRUCTION

4.1 Eligible Securities

- 4.1.1 All classes of the ordinary shares in issue are eligible for inclusion in the FTSE ET50 Index, subject to conforming to all other rules of eligibility, free float and liquidity.
- 4.1.2 Companies that are considered by the FTSE Environmental Markets Advisory Committee as a 'pure-play' ET company (where 'ET' is defined in Rule 1.2) will be eligible for inclusion in the FTSE ET50 Index.
- 4.1.3 Companies from countries that are included in the FTSE Global Equity Index Series are eligible for inclusion in the FTSE ET50 Index. For the list of countries that are eligible, please refer to the FTSE Global Equity Index Series Ground Rules which are available on www.ftse.com.
- 4.1.4 In order to ascertain whether a company is considered pure-play, the FTSE Environmental Markets Advisory Committee will consider the Pure-Play Analysis (PPA) that is carried out by Impax Asset Management in line with the periodic reviews for each of the prospective ET companies. The PPA will involve consideration of each of the following parameters:
- a) $\frac{\text{[ET revenues]}}{\text{[total revenues]}}$
 - b) $\frac{\text{[ET invested capital]}}{\text{[total invested capital]}}$
 - c) $\frac{\text{[ET EBITDA]}}{\text{[total EBITDA]}}$
- ET invested capital will be analysed using the book value for invested capital. Valuation of ET business is estimated by Impax Asset Management based on its own valuation analysis and that of other research analysts.
- 4.1.5 Exceptions to this calculation are as follows:
- a) Energy generating utilities; the company's energy generating capacity is assessed by the proportion of which are renewable.
 - b) Manufacturers of recycled goods; where the proportion of the company's products that are produced from recycled content is assessed.
- 4.1.6 A company will be considered a "pure-play" ET Company if any of the three calculations is greater than 50%. The company would then be eligible for inclusion in the FTSE ET50 Index.
- 4.1.7 Convertible preference shares and loan stocks are excluded until converted.
- 4.1.8 Companies whose business is that of holding equity and other investments (e.g. Investment Trusts) which are assumed by the Industry Classification Benchmark as Subsector equity investment instruments (8985) and Non-equity investment instruments which are assumed by the Industry Classification Benchmark as Subsector non-equity investment instruments (8995) will not be eligible for inclusion. For further details on the Industry Classification Benchmark (ICB), please visit the FTSE website.
- 4.1.9 China A-Shares are not eligible for inclusion to the FTSE ET50 Index due to restrictions on international investment.
- 4.1.10 Secondary lines are eligible for inclusion to the FTSE ET50 Index if the full market capitalisation (before the application of any investability weightings) of the secondary line is greater than 25% of the full market capitalisation of the company's main line. Should the market value of a secondary line that is a current FTSE ET50 Index constituent fall below 20% at the next review, the secondary line is deleted from the index.

SECTION 4

4.2 Free Float

4.2.1 The FTSE ET50 Index is adjusted for free float and foreign ownership restriction. Free float restrictions include:

- Shares directly owned by State, Regional, Municipal and Local governments (excluding shares held by independently managed pension schemes for governments).
- Shares held by Sovereign Wealth Funds where each holding is 10% or greater. If the holding subsequently decreases below 10%, the shares will remain restricted until the holding falls below 7%.
- Shares held by directors, senior executives and managers of the company, and by their family and direct relations, and by companies that they control.
- Shares held within employee share plans.
- Shares held by public companies or by non-listed subsidiaries of public companies.
- Shares held by founders, promoters, former directors, founding venture capital and private equity firms, private companies and individuals (including employees) where the holding is 10% or greater. If the holding subsequently decreases below 10%, the shares will remain restricted until the holding falls below 7%.
- All shares where the holder is subject to a lock-in clause (for the duration of that clause).
- Shares held for publicly announced strategic reasons, including shares held by several holders acting in concert.

4.2.2 For clarity, holdings not considered as restricted free float include:

- Portfolio holdings (such as pension and insurance funds)
- Nominee holdings (unless they represent restricted free float as defined by Rule 4.2.1)
- Holdings by investment companies
- ETFs

If in addition to the above restricted holdings, the company's shareholders are subject to legal restrictions, including foreign ownership restrictions, that are more restrictive, the legal restriction will be applied.

4.2.3 Free float restrictions will be calculated using available published information. The initial weighting of a constituent in the index will be applied in the following bands.

a) free float less than or equal to 15%	=	not eligible
b) free float greater than 15% but less than or equal to 20%	=	20%
c) free float greater than 20% but less than or equal to 30%	=	30%
d) free float greater than 30% but less than or equal to 40%	=	40%
e) free float greater than 40% but less than or equal to 50%	=	50%
f) free float greater than 50% but less than or equal to 75%	=	75%
g) free float greater than 75%	=	100%

4.2.4 A constituent's free float will also be reviewed and adjusted if necessary upon identification of information which necessitates a change in free float weighting following a corporate event. If the corporate event includes a corporate action which affects the index, any change in free float will be implemented at the same time as the corporate action. If there is not a corporate action, the change in free float will be applied as soon as practicable after the corporate event, subject to Rule 4.2.5 below.

SECTION 4

4.2.5 Following the application of an initial free float restriction, a constituent's free float will only be changed if its actual free float moves to more than 5 percentage points above the minimum or 5 percentage points below the maximum of an adjacent new band. This 5 percentage points threshold does not apply if the change is greater than one band; therefore a movement of 10 percentage points for the bands between 20% and 50% and 25 percentage points for the bands between 50% and 100% will not be subject to the 5 percentage point threshold.

4.3 Liquidity

4.3.1 Each security will be tested for liquidity annually in the December review by calculating its median daily trading per month. Historical volume data will be taken one year prior to the review cut-off date to form 12 months of liquidity data. The median trade is calculated by ranking each daily trade total and selecting the middle ranking day. Daily totals with zero trades are also included in the ranking; therefore a security that fails to trade for more than half of the days in a month will have a zero median trade.

4.3.2 For eligibility for inclusion, securities must turnover at least 0.05% of their shares in issue (after the application of any investability weightings) based on their median daily trade per month in ten of the twelve months prior to the semi-annual review.

4.3.3 For existing constituents, securities must trade at least 0.04% of its shares in issue (after the application of any investability weightings) based on its median daily trade per month for at least eight of the twelve months prior to the semi-annual review.

4.3.4 Any period when a share is suspended will be excluded from the above calculations.

4.3.5 A security that is excluded because it fails the liquidity requirement will be excluded from all other indices for the period until the next review.

4.3.6 In exceptional market conditions, if trading volumes are very low, FTSE may reduce the percentage figure in order to avoid a large number of constituents being removed from the FTSE ET50 Index. This discretion may not be applied to individual securities. If FTSE intends to exercise this discretion, it must make a public statement to that effect at least two weeks prior to the periodic review.

4.3.7 New issues, which do not qualify as early entrants will become eligible for inclusion at the next periodic review of constituents providing they have, since the commencement of Official non-conditional trading, a minimum trading record of at least 20 trading days prior to the date of the review and turnover of a minimum of 0.05% of their shares in issue based on its median daily trade, after the application of any free float and cross-holdings, per month in each month. For example, a new issue that did not qualify as an early entrant but has traded 21 days prior to the date of the review will need to have a turnover of a minimum of 0.05% of their shares in issue based on its median daily trade, after the application of any free float and cross-holdings for one month only. The inclusion of early entries (new issues) will not require a minimum trading record.

SECTION 5

5.0 PERIODIC REVIEW OF CONSTITUENTS**5.1 Review Dates**

- 5.1.1 The FTSE ET50 Index will be reviewed semi-annually in June and December using data as at the close of business on the last day in May and November.
- 5.1.2 The semi-annual review will be implemented after the close of business on the third Friday in June and December.
- 5.1.3 Capping will be implemented quarterly after the close of business on the third Friday in March, June, September and December.
- 5.1.4 Details of the outcome of the semi-annual review will be announced as soon as possible after the FTSE Environmental Markets Advisory Committee semi-annual meeting has concluded.

5.2 Rules for Insertion and Deletion at the Periodic Review

- 5.2.1 The rules for inserting and deleting securities at the periodic review are designed to provide stability in the selection of constituents of the FTSE ET50 Index while ensuring that the Index continue to be representative of the market by including or excluding those securities which have risen or fallen significantly.
- 5.2.2 A company will be inserted at the periodic review if it rises above the 40th position the FTSE ET50 Index when the eligible securities for the FTSE ET50 Index are ranked by full market capitalisation, i.e. before the application of any investability weighting.
- 5.2.3 A company will be deleted at the periodic review if it falls below the 60th position the FTSE ET50 Index when the eligible securities for the FTSE ET50 Index are ranked by full market capitalisation, i.e. before the application of any investability weighting.
- 5.2.4 A constant number of 50 constituents will be maintained for the FTSE ET50 Index. Where a greater number of companies qualify to be inserted in an index than those qualifying to be deleted, the lowest ranking constituents presently included in the index will be deleted to ensure that an equal number of companies are inserted and deleted at the periodic review. Likewise, where a greater number of companies qualify to be deleted than those qualifying to be inserted, the securities of the highest ranking companies which are presently not included in the index will be inserted to match the number of companies being deleted at the periodic review.
- 5.2.5 Where a company is deleted from the FTSE ET50 Index after the FTSE Environmental Markets Advisory Committee approved periodic changes to the indices, but before the periodic changes have been implemented, the highest ranking company as from the new Reserve List at the day of the deletion (see Rule 5.4), excluding current index constituents, will replace the deleted company.

5.3 Monitoring of Eligible Companies

- 5.3.1 The market capitalisation of companies eligible for inclusion in the FTSE ET50 Index is monitored by FTSE. All listed securities that pass Impax Asset Management's ET and PPA criteria will be included in the periodic reviews.

SECTION 5

5.4 **Reserve List**

5.4.1 FTSE will be responsible for publishing the five highest ranking non-constituents of the FTSE ET50 Index at the time of the periodic review. The appropriate Reserve List will be used in the event that one or more constituents are deleted during the period up to the next periodic review.

5.5 **Capping Methodology**

5.5.1 The FTSE ET50 Index uses a capping methodology every quarter to reduce concentration for constituents that are considered overweighted in the index. The capping methodology is described in more detail in Section 9.

SECTION 6

6.0 CHANGES TO CONSTITUENT COMPANIES

6.1 New Issues

- 6.1.1 Impax Asset Management will notify the FTSE Environmental Markets Advisory Committee as soon as possible if there are any new company issues expected. The new issue will have to pass the criteria detailed in Rule 4.1.3 and ranked at least 10th or higher in the FTSE ET50 Index, before application of individual constituent investability weightings. FTSE will normally decide to include the new issue as a constituent of the FTSE ET50 Index after the close of business on the second day of official trading. Therefore the lowest ranking constituent in the FTSE ET50 Index will be removed and included in the Reserve List. In all cases, advance notification confirming the timing of the inclusion of the new constituent will be given.
- 6.1.2 If a constituent of the FTSE ET50 Index is delisted it will be removed from the Index. The constituent will be replaced by the highest ranking company in the Reserve List by full market capitalisation five days prior to the event being implemented.
- 6.1.3 If the FTSE Environmental Markets Advisory Committee decides to include a new issue as a constituent security other than as part of the normal periodic review procedure, this decision must be announced to the market prior to the implementation.
- 6.1.4 For the purpose of this Rule 6.1, a company which is relisted following suspension or is reorganised or renamed or which arises from a demerger or complex reorganisation of another company which is not an existing constituent, shall not be considered to be a new issue.
- 6.1.5 The new issue will also be subject to the free float, cross-holdings and foreign ownership restriction and other requirements detailed in Section 4.

6.2 Deletions and Replacements

- 6.2.1 If a constituent is de-listed, ceases to have a firm quotation, is subject to a take-over or has, in the opinion of the Chairman of the FTSE Environmental Markets Advisory Committee (or their nominated deputies), ceased to be a viable constituent as defined by the Ground Rules, it will be removed from the FTSE ET50 Index.
- 6.2.2 When the company is removed from the FTSE ET50 Index, the vacancy will be filled by selecting the highest ranking security by full market value in the Reserve List as at the close of the index calculation five days prior to the deletion and adjusted accordingly such changes will be announced to the market prior to the implementation.
- 6.2.3 Constituents will be deleted from the index when confirmation is received that acceptance levels have reached a minimum of 85% and that any new shares of the bidding company (if applicable) are listed. A company deleted following a takeover, with a remaining free float of 15% or less, will not be re-considered for index inclusion until completion of a one year trading record.
- 6.2.4 Constituents removed in accordance with Rule 6.2.3, but which continue to trade thereafter, will be considered for re-inclusion to the index at the next review, subject to Section 4 and at least 6 months has passed between deletion and the implementation date of the changes arising from the review.

SECTION 6

6.3 Mergers, Restructuring and Complex Takeovers

- 6.3.1 If the effect of a merger or takeover is that one constituent in the FTSE ET50 Index is absorbed by another constituent, the resulting company will remain a constituent of the Index, and a vacancy will be created. This vacancy will be filled by selecting the highest ranking security by full market capitalisation in the Reserve List as at the close of the index calculation five days prior to the deletion and adjusted in accordance with Rule 6.1.
- 6.3.2 If a constituent company in the FTSE ET50 Index is taken over by a non-constituent company, the original constituent will be removed and replaced by the highest ranking non-constituent in the Reserve List. Any eligible company resulting from the takeover, subject to Section 4, will be eligible to become the replacement company if it is ranked higher than any company on the Reserve List.
- 6.3.3 If a constituent company is split to form two or more companies, then the resulting companies will be eligible for inclusion as index constituents in the FTSE ET50 Index providing they are larger than the smallest constituent, based on their respective full market capitalisations, i.e. before the application of any investability weightings and if they qualify in all other respects. For example, a FTSE ET50 constituent split into two companies may result in one or both of these companies remaining in the FTSE ET50 Index. Where both of these companies remain in the FTSE ET50 Index, the smallest FTSE ET50 Index constituent will be removed from the index and included in the Reserve List.
- 6.3.4 Any change pursuant to Rule 6.3 will be announced to the market prior to the implementation.

6.4 Suspension of Dealing

- 6.4.1 Where a constituent is suspended it may remain in the FTSE ET50 Index, at the price at which it is suspended, for up to 10 business days. During this time on advice from the FTSE Environmental Markets Advisory Committee may delete the constituent immediately either at its suspension price or at a value of zero. Replacement of constituents will be handled according to Rule 6.1. 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.
- 6.4.2 When a suspension of a constituent lasts beyond noon on the tenth business day (and the option to remove the constituent has not been exercised), the constituent will normally be deleted from the index on the eleventh trading day, either at its suspension price or at zero. Where suspension is for a reason not to the detriment of the constituent, it may be retained or removed at its suspension price with the approval of the Chairman (or their nominated deputies) of the FTSE Environmental Markets Advisory Committee. Replacement of constituents will be handled according to Rule 6.1.
- 6.4.3 Any deletion of suspended constituents will be announced to the market prior to the implementation.

6.5 Relisting of Suspended Constituents

- 6.5.1 Securities which, on relisting are larger than the smallest constituent of the FTSE ET50 Index shall be reinstated in the index at the price at which they were removed and the lowest ranking constituent will be selected for removal and included in the Reserve List. The reinstatement will happen after the close of business on the first day after the stock is relisted.

SECTION 6

- 6.5.2 Securities which on relisting are smaller than the smallest constituent of the index from which they were removed when suspended shall be initially re-instated in the same index at the price at which they were removed and then included in the index, if any, for which they then meet the size criteria.
- 6.5.3 After a suspended stock is re-listed the timetable for the events described in Rules 6.5.1 and 6.5.2, above, shall be as follows:
- | | |
|----------------------------------|--|
| After close of business on day 1 | the stock will be included in the indices from which it was suspended. |
| After close of business on day 2 | index constituents will be ranked by full market capitalisation and smallest constituent will be selected for deletion, using prices as at the close of business. FTSE will release a technical notice detailing any index changes, based on this ranking. |
| After close of business on day 3 | all changes will be implemented as detailed in the technical notice. |
- 6.5.4 Should a deleted constituent that has been suspended at a price other than zero (which would normally be the suspension price) be subsequently delisted and deemed to be of nil value, this stock will be included for one day's calculation in the index from which it was removed to enable the fall in the stock's value to be reflected in the index value. In this situation, the stock will be re-included at the suspension price, and its price will be zero throughout that day's calculation, including the closing price.
- 6.5.5 If a company relists after a continuous period of suspension lasting more than a year, FTSE reserve the right to treat the company as a new issue for the purposes of index eligibility.
- 6.5.6 If the procedure detailed in Rule 6.5.3, above, results in the re-instatement of a constituent of the FTSE ET50 Index, the displaced company will be included in the Reserve List.
- 6.5.7 Securities, which were removed from the FTSE ET50 Index, shall be reinstated in the index at the price which they were removed.
- 6.6 Changes to Constituent Weightings**
- 6.6.1 For the purposes of computing the FTSE ET50 Index, the number of shares in issue for each constituent security is expressed to the nearest share 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. Changes will become effective at open on the next trading day following the third Friday of March, June, September and December (subject to Rules 6.6.2 and 6.6.3).
- 6.6.2 If a corporate action is applied to an index constituent which involves a change in the number of shares in issue, the change in shares will be applied simultaneously with the corporate action.

SECTION 6

- 6.6.3 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 March of the following year.
- 6.6.4 All adjustments are made before the start of the index calculation on the day concerned, unless market conditions prevent this. All adjustments will be announced to the market at least two days in advance of their implementation.

SECTION 7

7.0 CHANGES TO THE CLASSIFICATION OF CONSTITUENT COMPANIES**7.1 Classification Structure**

- 7.1.1 In addition to the identification as an ET company, the FTSE ET50 Index constituents are classified into Industries, Supersectors, Sectors and Subsectors, as defined by the Industry Classification Benchmark (ICB).
- 7.1.2 Details of the Industry Classification Benchmark are available from FTSE (see Appendix B) and published on the FTSE website (www.ftse.com).

7.2 Classification Changes

- 7.2.1 Changes to the classification of a company within the FTSE ET50 Index will be advised by ICB and the necessary adjustments will be made to the relevant industry sectors at the same time that the constituent changes are implemented.
- 7.2.2 Where a constituent is the subject of a merger, restructure or complex takeover which results in a constituent (or part of a constituent) being absorbed by another, the industry classification of the resulting constituent(s) will be reviewed by ICB.
- 7.2.3 Any adjustment resulting from a change in a company's classification under Rule 7.2.2 will be implemented at the same time that any relevant constituent changes are implemented in the Index.
- 7.2.4 Periodic changes to the industry classification of a company are agreed and announced by ICB. Such changes will be implemented on the third Friday in March, June September and December.

SECTION 8

8.0 INDEX ALGORITHM AND CALCULATION METHOD

8.1 Prices

8.1.1 The FTSE ET50 Index will use actual last trade prices, where available, for securities.

8.1.2 Reuters real time exchange rates are used in the real-time index calculations.

8.2 Index Calculation

8.2.1 The FTSE ET50 Index is calculated using the following formula:

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

Where,

- $i = 1, 2, \dots, N$
- 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).
- 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. This factor is published by FTSE for each security 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.

SECTION 9

9.0 CAPPING METHODOLOGY

9.1 The FTSE ET50 Index capping process aims to reduce any concentration levels that may exist. The capping process is applied after the close of business on the third Friday in March, June, September and December based on the starting constituents of the next working day. The underlying data used in the capping process is as follows:

9.1.1 The security's closing price adjusted for corporate events after the close of business on the second Friday of each quarter.

9.1.2 The security's starting shares in issue figure, its investability weight on the next working day following the third Friday of each quarter.

9.2 FTSE ET50 Index Capping Methodology

The algorithm is applied to each constituent of the FTSE ET50 Index that requires capping, i.e. any constituent whose uncapped weight is greater than 10%.

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.
- Z is the percentage capping level.

Capping is applied to the constituents of the FTSE ET50 Index by the following methodology:-

Stage 1

Any constituents whose weights are greater than 10% are capped at 10%. The weights of all lower ranking constituents are increased correspondingly. The weights of lower ranking constituents are then checked and if they exceed 10% they are also capped at 10%. This process is repeated until no constituent weight exceeds 10%.

SECTION 9

Stage 2

Following the application of Stage 1, if the total index weight of those constituents whose individual weights exceed 5% is greater than 40% in aggregate, the procedure moves onto Stage 3 below. Otherwise no further action is required.

Stage 3

- a) If more than one stock is capped at 10%, then weights of all subsequent constituents previously capped at 10% are changed in accordance with the rules detailed below. For example, if the second largest stock is capped at 10% its weight will be reduced to 9% as given in b) below. The process is then continued from the relevant point in the steps below. Thus, if it is necessary to apply the provisions of Stage 3, only one constituent will have a 10% weight in the index.
- b) If the weight of the second largest constituent is greater than 9% the constituent's weight is capped at 9% and the weights of the lower ranking constituents are increased correspondingly. Following this procedure if the total index weight of those constituents whose individual weights exceed 5%, is greater than 40% the procedure moves onto the next stage below.
- c) If the weight of the third largest constituent is greater than 8% the constituent's weight is capped at 8% and the weights of the lower ranking constituents are increased correspondingly. Following this procedure if the total index weight of those constituents whose individual weights exceed 5%, is greater than 40% the procedure moves onto the next stage below.
- d) If the weight of the fourth largest constituent is greater than 7% the constituent's weight is capped at 7% and the weights of the lower ranking constituents are increased correspondingly. Following this procedure if the total index weight of those constituents whose individual weights exceed 5%, is greater than 40% the procedure moves onto the next stage below.
- e) If the weight of the fifth largest constituent is greater than 6% the constituent's weight is capped at 6% and the weights of the lower ranking constituents are increased correspondingly. Following these procedures if the total index weight of those constituents whose individual weights exceed 5%, is greater than 40% the procedure moves onto the next stage below.
- f) If the weights of the sixth largest constituent and any lower ranking constituents are greater than 4% those constituents' weights are capped at 4% and the weights of lower ranking constituents are increased correspondingly.

Stage 4

Following the application of Stage 3, the weights of each constituent are checked. If the total index weight of those constituents whose individual weights exceed 5% is greater than 40% in aggregate, then further capping is required. Firstly, if the largest constituents' weight has risen above 10% the weight is again capped at 10% and the weights of other constituents are adjusted accordingly. Then Stage 3 is repeated.

APPENDIX A

INDEX OPENING AND CLOSING HOURS

Index	Open	Close
FTSE ET50 Index	00:30	21:10

Notes:

Closing values at 21:10 will be disseminated at 21:30.

Timings are UK Hours.

APPENDIX B

FURTHER INFORMATION

Further information on the FTSE ET50 Index is available from FTSE please log on to www.ftse.com, who will also welcome comments on these Ground Rules and on the Index.

Enquiries should be addressed in the first instance to:

Client Services
FTSE
12th Floor
10 Upper Bank Street
London
E14 5NP

+44 (0) 20 7866 1810
+44 (0) 20 7866 8958 (fax)

Impax Asset Management can be contacted on:

Impax Group PLC

Mezzanine Floor
Pegasus House
37-43 Sackville Street
London
W1S 3EH

Tel: +44 (0) 20 7434 1122
Fax: +44 (0) 20 7434 1123

e-mail: info@impax.co.uk

Website: www.impax.co.uk

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