

# The FTSE Global Style Index Series Ground Rules

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## SECTION 1

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### 1.0 INTRODUCTION

#### 1.1 The FTSE Global Style Index Series

These ground rules describe the methodology used to calculate the FTSE Global Style Index Series. These ground rules should be read in conjunction with the FTSE All-World Index Series Ground Rules (*available at [www.ftse.com](http://www.ftse.com)*).

#### 1.2 Objective

The primary purpose of these indices is to provide investors with a measure of the performance of value and growth companies within the FTSE All-World Index and applied to various benchmarks based upon the FTSE All-World Index Series. A list of the current FTSE All-World benchmarks are available in Appendix C.

#### 1.3 Index Structure

1.3.1 There are two indices for each FTSE All-World Index benchmark, representing Value and Growth portfolios. The benchmarks on which the FTSE Global Style Index Series are produced are shown in Appendix C.

1.3.2 The Value indices are designed to reflect portfolios focusing on the price and value characteristics of securities, weighted towards those companies with identifiable value characteristics.

1.3.3 The Growth indices are designed to reflect portfolios focusing on earnings and revenue growth, weighted towards those companies with identifiable growth characteristics.

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## **SECTION 2**

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### **2.0 MANAGEMENT RESPONSIBILITIES**

#### **2.1 FTSE Policy Group**

2.1.1 The FTSE Policy Group, whose membership is representative of users of the FTSE Indices, is established by FTSE as an independent committee. The FTSE Policy Group is responsible for determining major policy issues and monitoring the activities of the FTSE Equity Indices Committee.

#### **2.2 FTSE Equity Indices Committee**

2.2.1 The FTSE Equity Indices Committee is responsible for maintaining the Ground Rules for the Management of the FTSE All-World Index Series and FTSE Global Style Index Series. Changes and exceptions to the Ground Rules may be made only as permitted by Rule 6.1.

2.2.2 The Committee ensures that a consistent approach is applied to the selection of constituents and the application of corporate events by the FTSE Regional Committees.

2.2.3 The Committee may establish sub-committees to undertake any of these duties or to consider particular issues in depth.

2.2.4 The Committee meets quarterly or more frequently, as required.

#### **2.3 FTSE Global Style Indices Advisory Committee**

2.3.1 The FTSE Equity Indices Committee has established the FTSE Global Style Indices Advisory Committee. The purpose of the FTSE Global Style Indices Advisory Committee is to undertake the country reviews of the FTSE Global Style Index Series and to ensure that constituent changes and index calculations are made in accordance with the Ground Rules. The FTSE Global Style Indices Advisory Committee is overseen by the FTSE Equity Indices Committee.

2.3.2 The FTSE Global Style Indices Advisory Committee meets semi annually or more frequently, as required.

#### **2.4 FTSE Global Classification Committee**

2.4.1 The FTSE Global Classification Committee is responsible for the industry classification of constituents of the FTSE All-World Index, as defined by the FTSE Global Classification System.

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## **SECTION 2**

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### **2.5 Committee Membership**

- 2.5.1 FTSE appoints the Chairman and Deputy Chairman of the FTSE Policy Group. The FTSE Policy Group appoints the Chairman and Deputy Chairman of the FTSE Equity Indices Committee. The relevant Chairman, or in his absence Deputy Chairman, will chair meetings of the respective committee and will represent that committee outside meetings.
- 2.5.2 The Chairman and Deputy Chairman of the FTSE Global Style Indices Advisory Committee are collectively responsible for approving constituent changes to the FTSE Global Style Index Series between meetings of the FTSE Global Style Indices Advisory Committee, on advice from the Secretary to the Committee and as permitted and as specified by the Ground Rules.
- 2.5.3 Terms of Reference for all Committees are available from FTSE (see Appendix F).

### **2.6 Secretary to the FTSE Policy Group, FTSE Equity Indices Committee, FTSE Global Style Indices Advisory Committee**

- 2.6.1 The Secretary to the FTSE Policy Group, FTSE Equity Indices Committee (previously the FTSE World Index Policy Committee), and the FTSE Global Style Indices Advisory Committee are appointed by FTSE to support the work of the FTSE Policy Group, FTSE Equity Indices Committee, and FTSE Global Style Indices Advisory Committee. The Secretary will maintain a record of constituent changes to the FTSE Global Style Index Series and is responsible for the timely publication of all constituent changes.
- 2.6.2 The Secretary is responsible for conducting the periodic country reviews of the FTSE Global Style Index Series and deciding which companies, if any, should be inserted and deleted at the periodic review (see Rules 10, 12 & 13).

### **2.7 FTSE**

- 2.7.1 FTSE is responsible for the daily operation of the FTSE Global Style Index Series. 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 carry out the periodic country reviews of the FTSE Global Style Index Series and implement the resulting constituent changes as required by the Ground Rules.
- 2.7.2 Changes to constituent value and growth weightings are made by FTSE in accordance with the Ground Rules. FTSE is responsible for publicising changes to constituent weightings.

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## **SECTION 3**

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### **3.0 ELIGIBLE COUNTRIES**

#### **3.1 Criteria for inclusion in the FTSE Global Style Index Series**

3.1.1 Any country that is included into the FTSE All-World Index is eligible for the FTSE Global Style Index Series. For a full list of the current benchmarks calculated please see Appendix C.

#### **3.2 Deletion/Suspension of countries**

3.2.1 Any country that is deleted/suspended in the FTSE All-World Index will be deleted/suspended in the FTSE Global Style Index Series.

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## **SECTION 4**

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### **4.0 ELIGIBLE SECURITIES**

- 4.1.1 Each security must be a current constituent of the FTSE All-World Index.
- 4.1.2 Free float weights for each constituent in the FTSE Global Style Index Series will be those published by FTSE for each constituent in the FTSE All-World Index Series.
- 4.1.3 Ground Rules for the FTSE All-World Index Series are available from FTSE (see Appendix F).

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## SECTION 5

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### 5.0 FTSE GLOBAL CLASSIFICATION SYSTEM

#### 5.1 Classification structure

- 5.1.1 The FTSE Global Style Index Series constituents are classified into Economic Groups, Sectors and Sub-sectors, as defined by the FTSE Global Classification System.
- 5.1.2 Details of the FTSE Global Classification System are available from FTSE and published on the FTSE web site ([www.ftse.com](http://www.ftse.com)).

#### 5.2 Classification changes

- 5.2.1 Changes to the classification of a company within the FTSE All-World Index will be advised by the FTSE Global Classification Committee.
- 5.2.2 Where a constituent is the subject of a merger, restructuring, or complex takeover which results in a constituent, or part of a constituent, being absorbed by another entity, or itself taking over another entity, the industry sector classification of the resulting constituent(s) will be reviewed by the FTSE Global Classification Committee.
- 5.2.3 Any adjustment resulting from a change in a company's classification under Rule 5.2.2 will be implemented at the same time that any relevant constituent changes are implemented in the Index.
- 5.2.4 Periodic changes to the industry classification of a company will be agreed and announced by the FTSE Global Classification Committee. Such changes will be implemented on a monthly basis after the close of the index calculation on the third Friday each month.

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## SECTION 6

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### 6.0 AMENDMENTS TO THESE GROUND RULES

- 6.1 Changes and exceptions to these Ground Rules can be authorised only by the FTSE Equity Indices Committee. In the event that any of those responsible for the operation and administration of the FTSE Global Style Index Series consider that an exception should be made to any of the Ground Rules, the issue must be brought to the attention of the Chairman or Deputy Chairman (or their deputies) of the FTSE Equity Indices Committee, who will normally put the matter to the full members of the FTSE Equity Indices Committee for a decision. If, however, the matter is urgent, the Chairman and Deputy Chairman (or their deputies) are collectively empowered to authorise an exception on behalf of the FTSE Equity Indices Committee, but must immediately notify, and subsequently refer the matter to, a meeting of the Committee.
- 6.2 Where an exception is granted to the Ground Rules under Rule 6.1, it shall not be deemed to create a precedent for future decisions of the FTSE Equity Indices Committee.
- 6.3 Material changes to the Ground Rules are announced after the FTSE Equity Indices Committee quarterly meeting at which they are agreed, but will not come into effect until after they have been confirmed at the following quarterly meeting, in order to allow for comments from index users and the market in general.

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## SECTION 7

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### 7.0 OTHER INFORMATION

#### 7.1 Changes to constituents of the FTSE All-World Index

7.1.1 Decisions regarding the addition of new, eligible constituents which are unrelated to existing index constituents or changes to the investible weighting of existing constituents are announced at the earliest possible opportunity prior to their inclusion in the Index Series, but the announcement may be contingent upon the confirmation of the listing date of the security and the fulfilment of all investibility screens.

7.1.2 Quarterly changes are published after the close of business on the Friday following the regular meetings of the FTSE Regional Committees for implementation after the close on the 3<sup>rd</sup> Friday of the month.

#### 7.2 Policy changes

7.2.1 Users of the FTSE Global Style Index Series are notified of policy changes by the FTSE Equity Indices Committee through appropriate media in advance of implementation (see Rule 6.3).

#### 7.3 Other announcements

7.3.1 Where the FTSE Equity Indices Committee gives special consideration to issues of particular importance to users of the FTSE Global Style Index Series, but where a decision is taken not to implement a change, users may be notified through appropriate media that such issues have been reviewed.

#### 7.4 Quality control

7.4.1 Error correction policy

7.4.2 The objective is to maintain the FTSE Global Style Index Series to the highest standards of accuracy and integrity, using reliable data sources and following best practice in statistical and operational procedures.

7.4.3 Where material errors occur in data or in calculation procedures, these are corrected promptly and users of the FTSE Global Style Index Series are notified through appropriate media. However, FTSE and the FTSE Equity Indices Committee are conscious of the risk of damaging the confidence of users through the frequent publication of amendments where trivial statistical errors have occurred that do not materially affect the accuracy of the published Index Series.

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## SECTION 7

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### 7.4.4 Re-calculations

7.4.5 The FTSE All-World Style Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the Index Series are notified through appropriate media.

7.4.6 Amended calculations are available from FTSE.

### 7.5 **Status of These Ground Rules**

7.5.1 These Ground Rules are a guide to the policies and procedures applying at the date of publication to the operation and maintenance of the FTSE Global Style Index Series. They have been prepared and approved by the FTSE Equity Indices Committee. However, these policies and procedures, and their precise application, are subject to variation and periodic review.

7.5.2 The purpose of publishing this guide is to provide information about the general basis on which decisions relating to the construction and publication of the FTSE Global Style Index Series are currently made.

7.5.3 In light of the intended purpose of this guide, and the likely variation and periodic review of the policies and procedures it contains, no reliance should be made on this guide or on the application of these policies and procedures when considering the operation or any application of the FTSE Global Style Index Series in relation to any financial transaction or product. No liability whether as a result of negligence or otherwise is accepted by FTSE, The Institute of Actuaries, The Faculty of Actuaries or any members of the FTSE Equity Indices Committee or FTSE Regional Committees or FTSE Global Style Indices Advisory Committee (or any other 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:

- (i) any reliance on this guide or the FTSE Global Style Index Series or any constituent data; and/or
- (ii) any errors or inaccuracies in this guide; and/or
- (iii) any non-application or misapplication of the policies or procedures described in this guide; and/or
- (iv) any errors or inaccuracies in the compilation or calculation of the FTSE Global Style Index Series or of any constituent data.

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## **SECTION 8**

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### **8.0 APPEALS AGAINST DECISIONS OF THE COMMITTEES**

- 8.1 A constituent or prospective constituent company (or broker or advisor acting on behalf of the company) may appeal against the decisions of the FTSE Committees on two grounds:
- (a) that the Committees acted outside of the Ground Rules for the Management of the FTSE Global Style Index; or
  - (b) that the Committees, when reaching their 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 Committees if it had been considered.
- 8.2 A request for an appeal must be made in writing to the Secretary of the FTSE Committees and must be received within six months of the application of the event giving rise to the appeal.

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## SECTION 9

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### 9.0 ALGORITHMS AND CALCULATION METHOD

#### 9.1 Prices

9.1.1 The FTSE Global Style Index Series uses actual closing mid-market or last trade prices, where available, for securities with local bourse quotations as detailed in the FTSE All-World Index Rules.

9.1.2 WM/Reuters Closing Spot Rates™ are used in the index calculation. Exchange rates are collected at 16:00 hrs London time (see Appendix D of the FTSE All-World Index Rules).

#### 9.2 Shares in Issue

9.2.1 The shares in issue for each constituent of the FTSE Global Style Index Series will be in line with those used in the FTSE All-World Index.

#### 9.3 Fundamental Data

9.3.1 The fundamental data items that are used in the FTSE Global Style Index Series will be taken from Worldscope and IBES. Full details of the value and growth measures that are used in the Style Ranking calculation can be found in Section 11 and Appendix A.

#### 9.4 Calculation Frequency

9.4.1 Please see Appendix H in the FTSE All-World Index ground rules for the calculation schedule for the FTSE Global Style Index Series.

#### 9.5 Algorithm

9.5.1 The FTSE Global Style Index Series is calculated using the chained Paasche methodology.

9.5.2 The performance of the FTSE Global Style Index Series on a given day is determined by the index's market capitalisation as at the close of that day, divided by the market capitalisation at the start of that day, where the latter is the previous day's close adjusted for capital changes, investibility weight changes, additions and deletions.

9.5.3 Adjustments are applied whenever capital changes take place, so that the performance of the FTSE Global Style Index Series reflects the experience of investors. Section E of these Ground Rules and The Global Guide to Calculation Methods – available from FTSE, see Appendix F - contains descriptions of the statistical procedures and algorithms used in the compilation of the Index Series.

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## SECTION 10

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### 10.0 PERIODIC REVIEW OF CONSTITUENTS

#### 10.1 Semi-Annual Reviews

10.1.1 The FTSE Global Style Index Series are reviewed semi annually in June and December. At these reviews each constituent will be assigned a value and growth weighting.

10.1.2 The fundamental data that is used in the semi annual reviews will be taken from Worldscope and IBES at the close of business on the last business day of May and November. The procedure for applying the changes to the semi annual review can be found in Section 12. Changes to the FTSE Global Style Index Series semi annual review will be incorporated simultaneously with the FTSE All-World Index.

10.1.3 Changes to the FTSE Global Style Index Series at the March and September FTSE All-World Index reviews will have their value and growth weightings assigned using data from Worldscope and IBES at the close of business on the last business day of February and August. This process can be found in Section 12 but will only be carried out for new additions after taking into account deletions at the same review. Existing constituents of the FTSE Global Style Index Series will remain unchanged. Changes to the FTSE Global Style Index Series March and September reviews will be incorporated simultaneously with the FTSE All-World Index.

10.1.4 Changes resulting from the semi annual review will be implemented after the close of the index calculation on the third Friday in June and December. Implementation after the close of the index calculation on the third Friday will also be applied for the FTSE Global Style Index Series reviews that are carried out in March and September.

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## SECTION 11

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### 11.0 FUNDAMENTAL DATA ITEMS

- 11.1 The following fundamental data items are used to calculate the Style Ranking for each company (definitions of these data items are given in Appendix A): -

Value Measures

Price to Book  
Sales to Price  
Dividend Yield  
Cash Flow to Price

Growth Measures

3 Year Historic Earnings Per Share Growth  
3 Year Historic Sales Growth  
2 Year Forward Earnings Per Share Growth  
2 Year Forward Sales Growth  
Return On Equity\*(1 - Payout Ratio)

- 11.2 The fundamental data for each of these items are determined and this is then used to calculate the Style Ranking for each company. The Style Ranking is assigned to each value and growth measure of a company and is then used to determine the Value and Growth Rankings (VR and GR respectively). The methodology for determining the Style Ranking and Value and Growth Rankings is given in Appendix B.
- 11.3 Once the Value and Growth Rankings have been calculated, they are then used to determine the Overall Style Ranking (OSR) for each index constituent (see Appendix C for index benchmarks). The Overall Style Ranking is used to determine the Value and Growth weighting for each constituent in the FTSE All-World Index. The methodology for determining the Overall Style Ranking can be found in Appendix B.

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## SECTION 12

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### 12.0 INDEX CONSTRUCTION AT SEMI ANNUAL REVIEW

12.1 The companies in each country are ranked according to their Overall Style Ranking. Growth at the top (high OSR) of the ranking and value at the bottom (low OSR) of the ranking. For the purposes of Index construction the Eurozone is treated as one country. Therefore all companies in Eurozone countries will be ranked together according to their Overall Style Ranking.

12.2 Constituents showing high growth characteristics (OSR tending towards 100) covering the top 35% of the investible market capitalisation of the country\* will be allocated to the Growth Index of the underlying Style Benchmark at a weight of 100%.

12.3 Constituents showing high value characteristics (OSR tending towards 0) covering the bottom 35% of the investible market capitalisation of the country\* will be allocated to the Value Index of the Style Benchmark at a weight of 100%.

12.4 The constituents covering the middle 30% of the investible market capitalisation of the country\* will be allocated across both the Value and Growth Indices according to the following bands:-

Investible Market Cap	Style Weighting In Country
Between 55% and 64.99%	75% Growth /25% Value
Between 45% and 54.99%	50% Growth /50% Value
Between 35.01% and 44.99%	25% Growth /75% Value

12.5 This process is then repeated for each relevant country\* in the FTSE All-World Index.

12.6 The methodology gives rise to certain companies investible market capitalisation falling either side of a particular band. In these circumstances the constituents style weight will be apportioned across the bands so as to ensure that its investible market capitalisation remains exactly the same as in the underlying benchmark.

12.7 By using this methodology the sum of the investible market capitalisations of the value and growth benchmarks will equal the investible market capitalisations of the underlying benchmark. Also, the relative weights of each country\* will be identical in the Style Indices as in the underlying benchmark.

\* The Eurozone is treated as one country

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## **SECTION 13**

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### **13.0 CHANGES TO CONSTITUENT COMPANIES**

#### **13.1 Changes other than at the FTSE Global Style Index Series Reviews**

13.1.1 Constituent changes to the FTSE All-World Index that are effective at other times are incorporated within the FTSE All-World Style Indices simultaneously ensuring that the composition of the FTSE All-World Index Series and the FTSE Global Style Index Series remains identical in terms of constituents and investible market capitalisation at all times. For a list of the current FTSE Global Style Index benchmarks please see Appendix C.

13.1.2 Stocks deleted from the FTSE All-World Index are removed from the appropriate FTSE Global Style Indices simultaneously.

#### **13.2 Fast Entries**

13.2.1 In the case of a fast entry to the FTSE All-World Index the Value Ranking and Growth Ranking will be determined by reference to the FTSE Global Classification System sub sector of the fast entry constituent. In the first instance this will be by reference to the relevant sub sector of the fast entry constituents country. If there are less than two companies in the country sub sector, then the Style Rankings will be determined by reference to the regional sub sector. If there are still two or less constituents of the fast entry constituent's sub sector then the rankings will be made by reference to the relevant global sub sector.

13.2.2 The Value Ranking and Growth Ranking are found by a simple average of all the Value/Growth Rankings in the relevant sub sector. The Overall Style Ranking is then calculated as per Appendix B Rule 3.0.

#### **13.3 Rights Issues, Scrip Issues, etc.**

13.3.1 Rights issues, scrip issues and similar corporate events will be applied to the FTSE Global Style Index Series in exactly the same way as they are applied to the FTSE All-World Index. No change will be made to the VR, GR, OSR or Style Weighting of the company due to the event.

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## SECTION 13

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### 13.4 Takeovers, Mergers, Demergers

- 13.4.1 The effect of takeovers, mergers and demergers will be applied to the FTSE Global Style Index Series in exactly the same way as they are applied to the FTSE All-World Index.
- 13.4.2 In the case of a takeover the Value Ranking, Growth Ranking and Overall Style Ranking of the largest company by full market capitalisation will be applied to the company(ies) being taken over.
- 13.4.3 In the case of a merger the Value Ranking, Growth Ranking and Overall Style Ranking of the largest company, as defined by the full market capitalisation of the companies subject to the merger, will be adopted by the newly merged company.
- 13.4.4 In the case of a demerger the Value Ranking, Growth Ranking and Overall Style Ranking of the demerged companies will remain the same as the unmerged company. The demerged companies will be treated as separate companies for VR, GR and OSR purposes at the next FTSE Global Style Index Series review.

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## APPENDIX A

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### Fundamental Data Definitions

The source of data used in the following fundamental data definitions is Worldscope, with the exceptions of 2 year Forward sales estimates and 2 years Forward EPS estimates where the source is IBES, shares in issue, and share price are sourced from FTSE.

#### Value Measures:-

##### Price to Book

Price to Book is a company's common/ordinary equity capital at the most recent fiscal year end divided by the company's market capitalisation at the review date. Common/ordinary equity is generally as reported, but is adjusted to exclude minority interest, preferred stock and selected items as appropriate.

##### Sales to Price

Sales to Price is a company's most recent annual sales value divided by the company's market capitalisation at the review date. (A more detailed definition of sales is provided under the "3 Year historic sales growth" heading)

##### Dividend Yield

Dividend Yield reflects the dividend declared per share and/or paid for the security in question for the most recent fiscal year, divided by the share price. It excludes special dividends but includes extra dividends. It is based on the "gross" dividend of a security, including normal withholding tax but excluding the special tax credit available in some countries.

##### Cash Flow to Price

Cash Flow to Price is generally a company's most recent Cash Flow for the year divided by the market capitalisation of the company at the review date. If Cash Flow is not reported it is estimated based on net income plus depreciation and other non-cash items.

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## APPENDIX A

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### Growth Measures:-

#### 3 Year Historic Sales Growth

3 Year Historic Sales Growth reflects the average of the company's three most recent consecutive absolute net sales or revenue annual growth values. The most recently reported sales value should be less than 18 months old (in developed markets). Sales values are for the 12 months to the company's fiscal year end and are generally as reported by the company. However, sales are generally adjusted to exclude excise taxes, sales from non-operating activities and discontinued operations in addition to sales generated by associated companies. If the company has changed its year end and a 12 month figure is not reported, the reported value is annualised. A sales value is also calculated for banks, insurance & financial companies and includes interest, investment & premium income in addition to commission & fees as appropriate.

#### 3 year Historic EPS Growth

3 Year Historic EPS Growth is the average of the company's three most recent consecutive absolute EPS annual growth values. The most recent EPS value should be less than 18 months old (in developed markets). Annual earnings per share (EPS) is for the 12 months to fiscal year end. EPS is calculated as net income after taxes, minority interest and preferred dividends, but before amortization of intangibles and after-tax extraordinary items, divided by adjusted shares.

#### 2 year Forward Sales Estimates

Sales estimates generally reflect sales derived from the company's core-operating activities. Generally transportation & non-operating costs are excluded from gross revenues for industrial corporations. Bank revenues include interest and non-interest income. Insurance revenues are comprised of net technical income and net financial income.

#### 2 year Forward EPS Estimates

EPS estimates are generally based on net income from continuing operations divided by weighted average shares outstanding for the year.

#### Return on Equity\*(1- Payout Ratio)

Return on Equity is Earnings per Share (EPS) for the most recent fiscal year divided by the previous year's book value per share. Payout ratio is Dividend per Share (DPS) divided by EPS. Values are again for the 12 months to the most recent fiscal year end. (*More detailed EPS, Book Value and dividend per share definitions can be found under the "3 Year historic EPS growth", "Price to Book", "Dividend Yield" headings respectively*).

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## **APPENDIX B**

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### **1.0 Determining Style Ranking**

- 1.1 The FTSE Global Style Index Series rank Value and Growth on the same scale between 0 (Value ) and 100 (Growth).
- 1.2 Extreme Growth stocks are allocated a ranking of 100 and extreme Value stocks are allocated a ranking of 0.
- 1.3 These rankings are allocated to each style measure (fundamental data item) accordingly.
- 1.4 Assuming that an individual company has all nine fundamental data items available the company will have nine "data rankings."
- 1.5 To determine each data ranking all companies have each data item collated by using Worldscope and IBES and then a normalising process is applied (see Appendix D) in order to determine the style ranking for each data item.

### **2.0 Determining Value Ranking (VR) and Growth Ranking (GR) for each company**

- 2.1 In the case of each constituent the five growth data rankings are added and divided by five to give the constituent's Growth Ranking (GR).
- 2.2 The same process is carried out for the four value items which after being summed and divided by four will give the Value Ranking (VR) for each constituent.
- 2.3 In the case of missing data the divisor is changed to reflect the reduced number of data items. e.g., if a constituent has only three growth measures they are summed and divided by three to reach the Growth Ranking.

### **3.0 Determining Overall Style Ranking (OSR) for each company**

- 3.1 After all constituents of the benchmark have had their Value and Growth Rankings calculated the two numbers are added and divided by two to give the Overall Style Ranking (OSR) for each constituent.

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## APPENDIX C

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### FTSE Global Style Index Series benchmarks

The FTSE Global Style Index benchmarks are calculated on the FTSE World Index. Value and Growth Indices will be produced for the FTSE World Index, derivatives of the FTSE World Index plus regional and country indices in the FTSE World Index, the FTSE Developed Index, derivatives of the FTSE Developed Index plus regional indices in the FTSE Developed Index.

- **FTSE World Index Country Codes**

WIAUS	Australia
WIAUT	Austria
WIBEL	Belgium/Luxembourg
WIBRA	Brazil
WICAN	Canada
WIDEN	Denmark
WIFIN	Finland
WIFRA	France
WIDEU	Germany
WIGRC	Greece
WIHKG	Hong Kong, China
WIIRL	Ireland
WIISR	Israel
WIITA	Italy
WIJPN	Japan
WIKOR	Korea
WIMEX	Mexico
WINLD	Netherlands
WINZL	New Zealand
WINOR	Norway
WIPTL	Portugal
WISGP	Singapore
WIZAF	South Africa
WIESP	Spain
WISWE	Sweden
WICHE	Switzerland
WITWN	Taiwan
WIGBR	UK
WIUSA	USA

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## APPENDIX C

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### • FTSE World Regional Index Codes

WIAMERS	World Americas
WIEURPS	World Europe-Asia Pacific
WIEURS	World Europe
WIEXUKS	World Europe ex UK
WIEXDEU	World Europe ex Germany
WIEXSWE	World Europe ex Sweden
WIEXCHE	World Europe ex Switzerland
WIEBLOCS	Eurobloc
WIEXEBS	World Europe ex Eurobloc
WIEXBKKS	World Europe ex Eurobloc ex UK
WINORDS	Nordic
WINAMERS	North America
WIPACS	World Asia Pacific
WIPACXJA	World Asia Pacific ex Japan

### • FTSE World Index Codes

WIXSAFS	World ex South Africa
WIXUSAS	World ex USA
WIXUKS	World ex UK
WIXJAS	World ex Japan
WIXEBS	World ex Eurobloc
WORLDS	World Index

### • FTSE Developed Index Codes

AWD	Developed
AWDXUS	Developed ex US
AWDXNA	Developed ex North America
AWDXUK	Developed ex UK
AWDXJ	Developed ex Japan
AWDXEBS	Developed ex Eurobloc

### • FTSE Developed Regional Index Codes

AWDPAC	Developed Asia Pacific
AWDPACXJ	Developed Asia Pacific ex Japan
AWDEURPS	Developed Europe-Asia Pacific
AWDEURS	Developed Europe
AWDEXUKS	Developed Europe ex UK

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## APPENDIX D

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### **1.0 Normalising process applied to Style Data Measures to determine Style Rankings**

- 1.1 The relevant fundamental data item is found for each constituent within a country.
- 1.2 Each figure for each fundamental data item is then plotted onto an x- axis. Therefore each country will have nine x-axes (four value and five growth) corresponding to each data item.
- 1.3 The data on each x-axis is then truncated (see below). Outliers beyond the truncation limits remain outside of the truncation limit itself. No data item is discarded.
- 1.4 Following truncation, the data on each x-axis then has three standard deviations applied. Again, any outliers beyond three standard deviations remain outside of the three standard deviation limit. No data is discarded.
- 1.5 The x-axis is then ranked so that 0 appears at the value end of the axis and 100 at the growth end. For the four value data items, the value measure is then found by identifying where on the x-axis each constituent lies and allocating that number as the value measure for each of the four value data items. The growth measures for the five growth data items are found in the same way. Those constituents which remain outside the truncation and standard deviation limits are then allocated the style rankings (either 0 or 100) dependant on which end of the x-axis they are.
- 1.6 In order to find the value ranking for each constituent the four value measures for the constituent are added and divided by four.
- 1.7 In order to find the growth measures for each constituent the five growth measures for the constituent are added and divided by five.
- 1.8 If one or more of the value or growth measures are missing the value or growth measure will be divided by the requisite number of data items available.
- 1.9 In order for the VR or GR to be calculated in this way data on at least one value date item and one growth data item must be available for the constituent. If this is not the case the constituent will have both value and growth rankings applied from its sub sector classification.

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### 2.0 Truncation Levels

2.1 The truncation levels for each fundamental data item are as follows: -

<b>Value Measures</b>	<b>Lower Level</b>	<b>Upper Level</b>
Price to Book	-20	20
Sales to Price	-30	30
Dividend Yield	0	20
Cash Flow to Price	-200	200

<b>Growth Measures</b>	<b>Lower Level</b>	<b>Upper Level</b>
3 Year Historic Earnings Per Share Growth	-200	200
3 Year Historic Sales Growth	-70	70
2 Year Forward Earnings Per Share Growth	-200	200
2 Year Forward Sales Growth	-70	70
Return On Equity* (1 - Payout Ratio)	-300	300

2.2 Outliers beyond the above limits for each data item remain outside the limits at this stage. No data or constituents are removed due to being an outlier. The same methodology applies during the standard deviation process with any outliers remaining outside of the three standard deviation limit.

2.3 Following this process the data ranking is allocated to each stock for each data item using the following X axis directions.

2.4 Value Measures:

Price to Book  
Sales to Price  
Dividend Yield  
Cash Flow to Price

2.4.1 The left hand side of the X axis will be 100 (high growth) and the right hand side of the X axis will be 0 (high value) for each data item.

2.5 Growth Measures:

3 year Historic Sales Growth  
3 year Historic EPS Growth  
2 year Forward Sales Growth  
2 year Forward EPS Growth  
Return on Equity \* (1- Payout Ratio)

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2.5.1 The left hand side of the X axis will be 0 (high value) and the right hand side of the X axis will be 100 (high growth) for each data item.

2.6 Following this procedure the data ranking for each constituent can be ascertained.

### **3.0 Allocation of Value Ranking (VR) and Growth Ranking (GR) by sub sector**

3.1 The allocation of VR and GR by sub sector only occurs when there is no data item available for value **and** no data item available for growth.

3.2 In this case both the VR and GR are calculated by taking the average of all of the value rankings and then the average of all of the growth rankings in the companies sub sector as defined by the FTSE Global Classification system.

3.3 The universe to be used in calculating these averages is as follows:-

3.3.1 The relevant sub sector in the companies country (NB the Eurozone is treated as a country) will be used provided there are at least two companies in the sub sector excluding the company to be calculated.

3.3.2 If there are less than two constituents in the country then the region will be used.

3.3.3 If there are less than two constituents on a regional basis then the FTSE World Index will be used.

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## APPENDIX E

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### 1.0 FTSE GLOBAL STYLE INDEX SERIES ALGORITHMS

#### 1.1 Introduction

1.1.1 The indices are calculated using the Chained Paasche methodology.

1.1.2 The index for an individual country in local currency is calculated after all security prices and capital changes affecting constituents since the previous calculation have been collected (i.e. since the last working day). Country indices in other currencies are derived by applying currency factors. In this description of the algorithms we discuss translation into dollars and sterling. Composite indices are derived by calculating the weighted mean performance of the constituent countries. This can be proved to be equivalent to the calculation of composite indices from first principles.

#### 1.2 Country Index in Local Currency

##### 1.2.1 Notation

Free Float of company <i>s</i> in country <i>c</i> at time <i>t</i>	$F_{cst}$
The style weighting of company <i>s</i> in country <i>c</i> at time <i>t</i>	$SW_{cst}$
Number of shares in issue for company <i>s</i> in country <i>c</i> at time <i>t</i>	$N_{cst}$
Price in local currency for company <i>s</i> in country <i>c</i> at time <i>t</i>	$P_{cst}$
Value in local currency of capital changes adjusted for free float for each capital change in country <i>c</i> at time <i>t</i>	$C_{ct}$
Value in dollars of each unit of local currency in country <i>c</i> at time <i>t</i>	$D_{ct}$
Value in sterling of each unit of local currency in country <i>c</i> at time <i>t</i>	$S_{ct}$
Summation of company data within country <i>c</i>	$s$
Summation of country data within region <i>r</i>	$c$
Value of index for country <i>c</i> at time <i>t</i>	$I_{ct}$
Value of composite index at time <i>t</i>	$I_{rt}$

$$\text{A country index at time } t \quad I_{ct} = \frac{\sum_s N_{cst} P_{cst} F_{cst} SW_{cst}}{B_{ct}}$$

where  $B_{ct}$  is the index base adjusted for past capital changes.

$$\text{At the start of the index the base is } B_{co} = \sum_s N_{cso} P_{cso} F_{cso} SW_{cso}$$

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or, the total market capitalisation of the constituent stocks at the start of the index.

Until the first capital change, the value of  $N_{cst}$  will not change and the index is:

$$\frac{\sum_s N_{cso} P_{cst} F_{cso} SW_{cso}}{\sum_s N_{cso} P_{cso} F_{cso} SW_{cso}}$$

This can be written as:

$$\frac{\sum_s N_{cso} P_{cso} F_{cso} SW_{cso} \left( \frac{P_{cst}}{P_{cso}} \right)}{\sum_s N_{cso} P_{cso} F_{cso} SW_{cso}}$$

establishing that the index reflects the weighted-average price performance of the constituents

To ensure continuity, it is necessary to adjust the base whenever a capital change takes place. The capital change,  $C_{ct}$ , is deemed to occur after the close of trading on day t-1 and before the calculation of the index on day t.

Thus:

$$I_{cst} = \frac{\sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}}{B_{ct-1}} = \frac{\left( \sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1} \right) + C_{ct}}{B_{ct}}$$

The new base,  $B_{ct}$ , therefore becomes:

$$B_{ct-1} \left[ 1 + \frac{C_{ct}}{\sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}} \right]$$

or:

$$B_{ct-1} + \frac{C_{ct}}{I_{ct-1}}$$

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Alternatively, the change in an index on any day can be viewed as reflecting the percentage change in market capitalisation for capital changes.

The performance of an index can be derived from

$$\frac{I_{ct}}{I_{ct-1}}$$

This equals:

$$\begin{aligned} & \frac{\sum_s N_{cst} P_{cst} F_{cst} SW_{cst}}{B_{ct}} \bigg/ \frac{\sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}}{B_{ct-1}} \\ &= \frac{\sum_s N_{cst} P_{cst} F_{cst} SW_{cst}}{N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}} \left( \frac{B_{ct-1}}{B_{ct}} \right) \\ &= \frac{\sum_s N_{cst} P_{cst} F_{cst} SW_{cst}}{N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}} \left( \frac{\sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}}{(N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}) + C_{ct}} \right) \\ &= \frac{\sum_s N_{cst} P_{cst} F_{cst} SW_{cst}}{(N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1}) + C_{ct}} \end{aligned}$$

The denominator in this expression is subsequently referred to as  $\text{adjcap}_{ct}$ .

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**1.3 Country Indices in Local Currencies and Dollars**

A country index in dollars at time t is: 
$$\$I_{ct} = \frac{\left( \sum_s N_{cst} P_{cst} F_{cst} SW_{cst} \right) D_{ct}}{\$B_{ct}}$$

where  $\$B_{ct}$  = Base of dollar index.

At the start,

$$\$B_{co} = \left( \sum_s N_{cso} P_{cso} F_{cso} SW_{cso} \right) D_{co}$$

Changes in the base are derived as before such that:

$$\$B_{ct} = \$B_{ct-1} \left( 1 + \frac{C_{ct} D_{ct-1}}{\left( \sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1} \right) D_{cst-1}} \right)$$

$$= \$B_{ct-1} \left( 1 + \frac{C_{ct}}{\left( \sum_s N_{cst-1} P_{cst-1} F_{cst-1} SW_{cst-1} \right)} \right)$$

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and, from the derivation of  $B_{ct}$  in Section A, it can be seen that:  $\frac{\$B_{ct}}{\$B_{ct} - 1} = \frac{B_{ct}}{B_{ct} - 1}$

showing that the proportional changes in dollar base values are the same as those for local currency base values.

A dollar index can therefore be derived more simply from:

$$\$I_{ct} = I_{ct} \cdot \left( \frac{D_{ct}}{D_{co}} \right)$$

Similarly, a sterling index can be derived from:

$$£I_{ct} = I_{ct} \cdot \left( \frac{S_{ct}}{S_{co}} \right)$$

or

$$£I_{ct} = \$I_{ct} \cdot \frac{(\$ / £)_t}{(\$ / £)_o}$$

### 1.4 Local Currencies for Composite indices

Composite (regional) Indices are calculated for regional areas, including the FTSE Global Style Index Series.

A composite index is one which has constituent stocks denominated in multiple currencies. Two different types of calculation are carried out on these indices, the first is a standard index calculation (as described above), the second is a calculation of an index value with currency movements stripped out.

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The formula for composite indices is:

$$XL_i = ((PI_i/M'_i) + 1) \cdot XL_{i-1}$$

and when  $i=1$ ,

$$XL_i = 100$$

where

- $i$  = time period
- $XL_i$  = composite local index at time  $i$
- $PI_i$  = Index performance adjusted for exchange rate fluctuations at time  $i$ .
- $M'_i$  = adjusted market capitalisation (adjusted for stock splits, stock dividends, rights issues, new issues of stock, stock cancellations for constituents, changes in free float, style weighting, and the addition or deletion of constituents) represented in dollars using the exchange rates at  $i-1$ .

The index performance is used in the calculation of composite local indices, essentially it is the performance of the constituent indices and is calculated by:

$$PI_i = \sum (M_i - M'_i) \cdot E_{i-1}$$

where

- $M_i$  = market capitalisation of constituent index at time  $i$ .
- $M'_i$  = adjusted market capitalisation of the constituent index (adjusted for stock splits, stock dividends, rights issues, new issues of stock, stock cancellations for constituents, free float changes, style weighting, and the addition or deletion of constituents)
- $E_{i-1}$  = Exchange rate of the constituent index at  $i-1$

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### Further information on the FTSE Global Style Index Series <sup>TM/SM</sup>

Further information on the FTSE Global Style Index Series<sup>TM/SM</sup> is available from FTSE, who will also welcome comments on these Ground Rules and on the Index Series.

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## APPENDIX G

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### FTSE GLOBAL STYLE INDEX CALCULATION SCHEDULE

#### 1.0 Normal schedule

- 1.1 The Global Style Index Series is calculated once daily at approximately 21:30 - 22:00 London time, shortly after the close of North American securities markets. Selected indices within the series are calculated on a real time basis, see below.
- 1.2 The Index Series is calculated every weekday, when one or more of the constituent markets are open, however on January 1<sup>st</sup>. the index may not be disseminated. There is no separate calculation to accommodate the Saturday opening of any market.

*Q:\Ground Rules\FTSE All-World Style Indices Draft Ground Rules v 1.1.Doc  
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