Ground Rules

FTSE Global Sustainable Yield Index Series

v1.4

Contents

Section 1

Introduction

1.0 Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE Global Sustainable Yield Index Series calculated by FTSE International Limited (FTSE). Copies of these Ground Rules are available from FTSE Russell.

1.2 The FTSE Global Sustainable Yield Index Series has been designed to reflect the performance of an index consisting of securities exhibiting relatively high and sustainable yields.

1.3 These Ground Rules should be read in conjunction with the relevant underlying Index Ground Rules which are available at www.ftserussell.com.

1.4 The FTSE Global Sustainable Yield Index Series consists of the following indexes:

FTSE Global Sustainable Yield Index	Underlying Universe	Base Currency
Global		
FTSE All-World Sustainable Yield Index	FTSE All-World Index	USD
FTSE Developed Sustainable Yield Index	FTSE Developed Index	USD
FTSE Developed ex US Sustainable Yield Index	FTSE Developed ex US Index	USD
FTSE Emerging Sustainable Yield Index	FTSE Emerging Index	USD
Regional		
FTSE Developed Asia Pacific ex Japan Sustainable Yield Index	FTSE Developed Asia Pacific ex Japan Index	USD
FTSE Developed Europe Sustainable Yield Index	FTSE Developed Europe Index	EUR
FTSE Developed Europe ex UK Sustainable Yield Index	FTSE Developed Europe ex UK Index	EUR
Country		
FTSE ASFA Australia 300 Sustainable Yield Index	FTSE ASFA Australia 300 Index	AUD
FTSE Japan Sustainable Yield Index	FTSE Japan Index	JPY
FTSE UK Sustainable Yield Index	FTSE 350 ex Investment Trusts Index	GBP
FTSE USA Sustainable Yield Index	FTSE USA Index	USD

1.5 Price, Total Return and Net of Tax Indexes will be calculated on an end of day basis. The Total Return Indexes include income based on ex dividend adjustments. All dividends are applied as declared.

1.6 A series of net of tax Total Return Indexes are also calculated based on the maximum withholding tax rates applicable to dividends received by institutional investors who are not resident in the same country as the remitting company and who do not benefit from double taxation treaties.

The underlying tax rate information is available from FTSE Russell.

1.7 **FTSE Russell**

FTSE Russell is a trading name of FTSE International Limited (FTSE), Frank Russell Company (Russell), FTSE TMX Global Debt Capital Markets Inc. and FTSE TMX Global Debt Capital Markets Limited (together, "FTSE TMX") and MTSNext Limited. FTSE, Russell and FTSE TMX are each benchmark administrators of indexes. References to FTSE Russell should be interpreted as a reference to the relevant benchmark administrator for the relevant index.

1.8 **Statement of Principles for FTSE Russell Market Capitalisation Weighted Equity Indexes (the Statement of Principles)**

Indexes need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the Rules do not fully cover a specific event or development, FTSE Russell will determine the appropriate treatment by reference to the Statement of Principles which summarises the ethos underlying FTSE Russell's approach to index construction. The Statement of Principles is reviewed annually and any changes proposed by FTSE Russell are presented to the FTSE Russell Policy Advisory Board for discussion before approval by FTSE Russell's Governance Board.

The Statement of Principles can be accessed using the following link:
Statement_of_Principles.pdf

1.9 **Index Objective and Intended Use**

1.9.1 The index series and index statistics are intended to reflect the investment markets included in the index definitions and to facilitate the detailed analysis of such markets.

1.10 FTSE Russell hereby notifies users of the index series that it is possible that circumstances, including external events beyond the control of FTSE Russell, may necessitate changes to, or the cessation of, the index series and therefore, any financial contracts or other financial instruments that reference the index series should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.11 Index users who choose to follow this index series or to buy products that claim to follow this index series should assess the merits of the index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE Russell for any losses, damages, claims and expenses suffered by any person as a result of:

- any reliance on these Ground Rules, and/or
- any errors or inaccuracies in these Ground Rules, and/or
- any non-application or misapplication of the policies or procedures described in these Ground Rules, and/or
- any errors or inaccuracies in the compilation of the index series or any constituent data.

1.12 **These Ground Rules**

1.12.1 This document sets out the Ground Rules for the construction and maintenance of the FTSE Global Sustainable Yield Index Series.

1.12.2 These Ground Rules should be read in conjunction with the FTSE Global Equity Index Guide to Calculation Methods and Corporate Actions and Events Guide which can be accessed using the links below:

FTSE_Global_Equity_Index_Series_Guide_to_Calc.pdf

Corporate_Actions_and_Events_Guide.pdf

Section 2

Management Responsibilities

2.0 Management Responsibilities

2.1 **FTSE International Limited (FTSE)**

2.1.1 FTSE is responsible for the daily operation of the FTSE Global Sustainable Yield 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 also carry out the periodic country reviews of the FTSE Global Sustainable Yield Index Series and implement the resulting constituent changes as required by the Ground Rules.

2.1.2 Changes to constituent weightings are made by FTSE in accordance with the Ground Rules. FTSE will also be responsible for publicising such changes to constituent weightings.

2.1.3 Underlying companies are governed by their respective underlying Index rules and associated committees.

2.2 **Amendments to these Ground Rules**

2.2.1 These Ground Rules shall be subject to regular review by FTSE Russell to ensure that they continue to meet the current and future requirements of investors and other index users.

2.2.2 As provided for in Rule 1.8, where FTSE Russell determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles as provided for in Principle 2. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Ground Rules should subsequently be updated to provide greater clarity.

2.3 **Recalculations**

2.3.1 The FTSE Global Sustainable Yield Index Series is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE Global Sustainable Yield Index Series are notified through appropriate media.

For further information refer to the FTSE Russell Recalculation Policy and Guidelines document which is available from the FTSE Russell website using the link below or by contacting info@ftse.com.

FTSE_Russell_Index_Recalculation_Policy_and_Guidelines.pdf

Section 3

Queries and Complaints

3.0 Queries and Complaints

FTSE Russell's complaints procedure can be accessed using the following link:
Queries_and_Complaints_Policy.pdf

Section 4

Data and Sustainability Metrics

4.0 Data and Sustainability Metrics

4.1 Thomson Reuters I/B/E/S Forecast And Historic EPS and DPS

Dividend per share (DPS) and Earnings per share (EPS) forecasts are obtained from the Thomson Reuters I/B/E/S consensus database together with reported figures from the Thomson Reuters I/B/E/S actuals database as published by Thomson Reuters. Consensus estimates are represented by the median analyst estimate. No requirement is placed on the minimum number of analysts following an individual security. Security level EPS & DPS data is adjusted for corporate actions and converted to common currency at the data cut-off date of each review using the WM/Reuters Closing Spot Rates ^{TM}. The base currency for each security is the currency of the raw Thomson Reuters I/B/E/S fiscal year one DPS estimate.

DPS and EPS data for an irregular accounting period (i.e. less than 365 or greater than 366 days) are annualised by scaling by 365/ length of the accounting period in days. Accounting periods that are shorter than 6 months or longer than 18 months (182 and 547 days respectively) are excluded.

The Thomson Reuters I/B/E/S database at the Thomson Reuters I/B/E/S statistical or data date prior to the March and September review data cut-off dates i.e. February and August are used. The monthly Thomson Reuters I/B/E/S database is published and available on the third Thursday of each month. The index review data cut off dates are the last business day of February and August.

4.2 Yield Metrics

4.2.1 12 Month Forward DPS

Thomson Reuters I/B/E/S consensus DPS & EPS forecasts are associated with a fiscal period indicator, such that FY1 refers to the closest fiscal year for which analysts are providing forecasts and for which no reported is yet available. FY2 & FY3 refer to subsequent year's forecasts. The fiscal year end date associated with each forecast for a given security, is denoted by FYE_i^{FY1},FYE_i^{FY2}, FYE_i^{FY3} for fiscal years 1, 2 and 3 respectively.

The security level 12 month forward DPS estimate, DPS_i^{12m}, is a weighted average of Thomson Reuters I/B/E/S DPS forecasts for future dated fiscal year ends, where the future is defined relative to the index review data cut-off date. If the FY1 fiscal year end date is equal to or before the data cut-off date, it is considered to be in the past. If the FY2 fiscal year end date is before the data cut-off date, the DPS estimate is considered erroneous and is excluded.

days $ToFYE_i^{FY1}$ is the number of days between the data cut-off date and the FY1 fiscal year end. Equivalent variables are defined for FY2 and FY3.

$$DPS_i^{12m} = \begin{cases} FY1_i \text{ in past} & \frac{(daysToFYE_i^{FY2} * DPS_i^{FY2} + (365 - daysToFYE_i^{FY2}) * DPS_i^{FY3})}{365} \\ FY1_i \text{ in future} & \frac{(daysToFYE_i^{FY1} * DPS_i^{FY1} + (365 - daysToFYE_i^{FY1}) * DPS_i^{FY2})}{365} \\ FY1_i \text{ in past and } daysToFYE_i^{FY2} > 365 & DPS_i^{FY2} \\ FY1_i \text{ in future and } daysToFYE_i^{FY1} > 365 & DPS_i^{FY1} \end{cases}$$

In the event that the required DPS_i^{FY2} or DPS_i^{FY3} estimate is not available the 12 month forward DPS estimate is the next future dated fiscal year estimate subject to the requirement that the fiscal year end date lies at least 9 months (274 days) in the future.

$$DPS_i^{12m} = \begin{cases} FY1_i \text{in past} & DPS_i^{FY3} = \text{null} & daysToFYE_i^{FY2} \geq 274 & DPS_i^{FY2} \\ FY1_i \text{in past} & DPS_i^{FY3} = \text{null} & daysToFYE_i^{FY2} < 274 & \frac{N}{A} \\ FY1_i \text{in future} & DPS_i^{FY2} = \text{null} & daysToFYE_i^{FY1} \geq 274 & DPS_i^{FY1} \\ FY1_i \text{in future} & DPS_i^{FY2} = \text{null} & daysToFYE_i^{FY1} < 274 & \frac{N}{A} \end{cases}$$

In the event that the required $FY1_i$ and $FY2_i$ as reported by Thomson Reuters I/B/E/S are both in the past, DPS_i^{12m} is set to null.

4.2.2 12 Month Forward EPS

The calculation of 12 month forward EPS estimates follows the calculation methodology detailed for the calculation of 12 month forward DPS estimates (see Rule 4.2.1).

4.2.3 12 Month Forward Dividend Yield

The 12 month forward dividend yield, DY_i^{12m}, is the ratio of the twelve month forward DPS estimate (DPS_i^{12m}) to price at the data cut-off date ($P_i^{cut\text{-}off}$). The price on the data cut-off date is converted to the same currency as DPS_i^{FY1}, using the exchange rate on the data cut-off date.

$$DY_i^{12m} = \frac{DPS_i^{12m}}{P_i^{cut\text{-}off}}$$

4.2.4 12 Month Forward Industry Dividend Yield And Extreme Yield

The 12 month forward industry dividend yield, DY_j^{12m}, is the equally weighted average across all securities in the same industry of the reference index, after missing and zero forecasts are removed.

For all indexes derived from the FTSE All-World Index the reference universe used to determine the 12 month forward ICB industry dividend yield is the FTSE Developed and FTSE Emerging Index constituents. Indexes derived from a reference universe other than the FTSE All World, use the relevant underlying index industry average.

$$DY_j^{12m} = \frac{1}{m_j} \sum_{i \subset j}^{m_j} DY_i^{12m}$$

Where m_j is the number of stocks in index industry j and $DY_i^{12m} \neq 0$.

The excess 12 month forward dividend yield, XDY_i^{12m}, is the security level 12 month forward dividend yield minus the reference index 12 month forward industry yield.

$$XDY_i^{12m} = DY_i^{12m} - DY_j^{12m};\ i \in j$$

The 12 month forward excess dividend yield percentile rank, $RankDY_i^{12m}$ is the percentile rank in descending order of the 12 month forward excess dividend yield.

$$RankDY_i^{12m} = percentile(XDY_i^{12m})$$

A security is considered to exhibit an extreme yield if its 12 month forward excess dividend yield percentile rank is greater than or equal to the 99th percentile.

$$\text{Extreme Yield}=\left(\text{RankDY}_{i}^{12m}\geq 99\%\right)$$

Note: the metrics outlined in Rules 4.2.5, 4.2.6, and 4.3 are calculated from the relevant universe from which the Extreme Yield securities have been removed.

4.2.5 Country Yield

The country yield requirement is set by reference to capitalisation weighted 12 month forward underlying country index dividend yield DY_k^{12m}.

$$DY_k^{12m}=\sum_{i\subset k}^{N} w_i * DY_i^{12m}$$

Where $w_{i\subset k}$ is the free-float market capitalisation weight of security i in the underlying country k after the removal of Extreme Yield securities.

4.2.6 Country Yield Buffer

Existing constituents of the FTSE Global Sustainable Yield Index Series must pass a lower yield threshold than non-constituents. Existing constituents must exhibit a 12 month forward yield that is greater than the 80% of the 12 month forward parent country index yield.

$$DY_{i\subset k}^{12m}\geq 0.8\times DY_k^{12m}$$

4.3 Sustainable Payout Ratio

The 12 month forward payout ratio, PR_i^{12m}, is the ratio of the Thomson Reuters I/B/E/S 12 month forward DPS and EPS estimates. If EPS_i^{12m}<=0 and DPS_i^{12m}>0, the payout ratio is set to 2; if EPS_i^{12m}<=0; DPS_i^{12m}=0, the payout ratio is set to 0, PR_i^{12m}>2, the payout ratio is set to 2.

$$PR_i^{12m}=\begin{cases} EPS_i^{12m}>0 & \dfrac{DPS_i^{12m}}{EPS_i^{12m}} \\ EPS_i^{12m}\leq 0 \text{ and } DPS_i^{12m}>0 & 2 \\ DPS_i^{12m}=0 & 0 \end{cases}$$

The industry average payout ratio, PR_j^{12m}, is the equally weighted average across all stocks in the same industry of the reference index. The Industry Classification Benchmark (ICB) sector 8670 (REITs) is treated as a distinct industry.

The reference universe used to determine the industry average payout ratio is the FTSE Developed (Emerging) index constituents for FTSE Developed (Emerging) Sustainable Yield indexes. Indexes derived from a reference universe other than the FTSE All World, use the relevant underlying index industry average.

$$PR_j^{12m}=\frac{1}{n_j}\sum_{i=1}^{n_j} PR_{i\subset j}^{12m}$$

Where n_j is the number of stocks in index industry j.

The excess payout ratio XPR_i^{12m}, is the difference between a security and the reference index industry average 12 month forward payout ratio.

$$XPR_i^{12m}=PR_i^{12m}-PR_j^{12m};\ i\in j$$

4.4 Historic Dividend Cut

The most recent actual DPS $\left(DPS_i^{FY0,t}\right)$ reported by Thomson Reuters I/B/E/S at the Thomson Reuters I/B/E/S data date is compared to the reported DPS from the previous fiscal year $\left(DPS_i^{FY-1,t}\right)$ to determine whether an historical dividend cut has occurred. Reported DPS numbers are adjusted for corporate actions between the relevant Thomson Reuters I/B/E/S data dates. The actual DPS values are adjusted for corporate actions and converted to the currency of the FY1 forecast DPS using the WM/Reuters Closing Spot Rates TM on the data cut-off date.

$$Cut^H=(DPS_i^{FY0,t}/\ DPS_i^{FY-1,t}<0.999)$$

If $DPS_i^{FY-1,t}=0$, then no historic cut is possible. If either $DPS_i^{FY-1,t}$ or $DPS_i^{FY0,t}$ is not known, not historic cut is assigned.

To avoid the possibility of rounding errors resulting from corporate actions and currency adjustments falsely signalling an historic dividend cut, the threshold for a cut is set at 0.999.

4.5 Forecast Dividend Cut

If the fiscal year end date of the Thomson Reuters I/B/E/S DPS fiscal year 1 forecast $\left(DPS_i^{FY1}\right)$ has 6 months or more to run (183 days as of the data cut-off date), i.e. it spans the next review period, then it forms the forecast dividend and is compared to the previous year's actual or reported dividend from Thomson Reuters I/B/E/S. If the Thomson Reuters I/B/E/S fiscal year 1 forecast has less than six months to run as of the data cut-off date, then the Thomson Reuters I/B/E/S fiscal year 2 forecast forms the forecast dividend.

Actual or reported DPS are adjusted for corporate actions and converted to the currency of the forecast dividend using WM/Reuters Closing Spot Rates TM on the data cut-off date. To avoid the possibility of rounding errors resulting from corporate action and currency adjustments falsely signalling a forecast dividend cut, the threshold for a cut is set at 0.999.

$$Cut^F=\begin{cases}daysToFYE_i^{FY1}\geq 183 & (DPS_i^{FY1,t}/\ DPS_i^{FY0,t}<0.999)\\ daysToFYE_i^{FY1}<183 & (DPS_i^{FY2,t}/\ DPS_i^{FY0,t}<0.999)\end{cases}$$

If $DPS_i^{FY0,t}=0$, then no forecast cut is possible. If either a forecast DPS or $DPS_i^{FY0,t}$ is not known, no forecast cut is assigned.

In the event of $FY1_i$ being in the past and days to $FY2_i$ being less than 183, no forecast cut is assigned.

4.6 Financial and Operational Strength Metrics

To asses a company's financial strength, financial and operational strength scores are calculated based on "Value Investing: The Use of Historical Financial Statement Analysis to Separate Winners from Losers", Piotroski, Journal of Accounting Research, 2000.

The following metrics are assigned a 0/1 score depending on whether they signal an improving or deteriorating operational and financial situation. The scores are summed for each security over the eight (Financials) or nine (Non-Financials) financial and operational strength metrics. The Worldscope designation of Financials and Non-Financials is used. All metrics use the latest full year reported data from Worldscope. Metrics calculated as ratios or the difference between two ratios where either denominator is zero or negative are assigned a score of 0.

Financial and Operational Strength Metrics

	Non Financials	Financials	Rationale
1.	Return on assets	Return on assets	Profitability
2.	Change in return on assets	Change in return on assets	Profitability
3.	Cash-flow from operations	Change in net margin	Profitability
4.	Accruals	Not applicable	Profitability
5.	Change in leverage	Change in leverage	Capital Structure
6.	Change in current ratio	Change in current ratio	Capital Structure
7.	Issuance	Issuance	Capital Structure
8.	Change in gross margin	Change in operating margin	Operational Efficiency
9.	Change in asset turnover	Change in net income per employee	Operational Efficiency

4.6.1 Return on Assets and Change in Return On Assets

The Return on Assets metric F_t^{ROA}, is 1 if the ratio of net income before extraordinary items to Total Assets is positive and if $Total\ Assets_{t-1}>0$; otherwise it is 0.

$$ROA_t=\frac{Net\ Income\ Before\ Extraordinary\ Items_t}{Total\ Assets_{t-1}}$$

$$F_t^{ROA}=1\ if\ ROA_t>0\ else\ 0$$

The change in Return on Assets metric, $F_t^{\Delta ROA}$ is 1 if the latest year on year change in ROA is positive and both $Total\ Assets_{t-1}$ and $Total\ Assets_{t-2}$ are positive; otherwise it is 0.

- $\Delta ROA_t=ROA_t-ROA_{t-1}$

$F_t^{\Delta ROA}=1\ if\ \Delta ROA_t>0\ and\ Total\ Assets_{t-1}>0\ and\ Total\ Assets_{t-2}>0\ else\ 0$

4.6.2 Cash-flow from Operations

The Cash-flow from Operations metric, F_t^{CFO}, is 1 if the ratio of Cash-flow from Operations in the most recent reporting period to Total Assets at the previous year end is positive and $Total\ Assets_{t-1}$ are is positive; otherwise it is 0.

$$CFO_t=\frac{Cashflow\ from\ Operations_t}{Total\ Assets_{t-1}}$$

$F_t^{CFO}=1\ if\ CFO_t>0\ and\ Total\ Assets_{t-1}>0\ else\ 0$

4.6.3 Accruals

The Accruals metric, F_t^{ACC}, is 1 if Cash-flow from Operations is greater than Net Income in the most recent reporting period; otherwise it is 0.

$F_t^{ACC}=1\ if\ Net\ Cash\text{-}flow\ from\ Operations_t>Net\ Income_t\ else\ 0$

4.6.4 Change in Leverage

The change in Leverage metric, $F_t^{\Delta LEV}$, is 1 if the change in leverage from the previous to the most recent reporting period is negative and both $Total\ Assets_{t-1}$ and $Total\ Assets_{t-2}$ are positive; otherwise it is 0. Leverage is the ratio of Long Term Debt in the most recent reporting period to Total Assets in the previous period.

$$LEV_t=\frac{Long\ Term\ Debt_t}{Total\ Assets_{t-1}}$$

- $\Delta LEV_t=LEV_t-LEV_{t-1}$

$F_t^{\Delta LEV}=1\ if\ \Delta LEV_t<0\ and\ Total\ Assets_{t-1}>0\ and\ Total\ Assets_{t-2}>0\ else\ 0$

4.6.5 **Change in Current Ratio**

For non financials, current assets and current liabilities are as reported on the balance sheet. For financials, they are calculated as follows;

Banks

Current assets =

- Total Assets
- Other Assets
- Property, plant and equipment
- Real Estate Assets
- Customer Liabilities on Acceptances (Assets)
- Investment in Associated Companies
- Total Loans (including Interbank Loans)
- Other investments

Current liabilities =

- Deposits + Short Term Debt & Current Portion of Long Term Debt

Insurance

Current assets =

- Cash + Fixed Income + Common Stocks

Current liabilities =

- Total reserves + Short Term Debt & Current Portion of Long Term Debt

Other Financials

Current Assets =

- Cash + Net receivables + Securities Inventory + Custody Securities + Net loans

Current Liabilities =

- Deposits + Short Term Debt & Current Portion of Long Term Debt

The change in Current Ratio metric, $F_t^{\Delta CR}$, is 1 if the change in Current Ratio from the previous to the most recent reporting period is positive and both *Current Liabilities*$_t$ and *Current Liabilities*$_{t-1}$ are positive; otherwise it is 0. The Current Ratio is the ratio of Current Assets to Current Liabilities in the most recent period.

$$CR_t = \frac{Current\ Assets_t}{Current\ Liabilities_t}$$

- $CR_t = CR_t - CR_{t-1}$

$F_t^{\Delta CR} = 1$ *if* $\Delta CR_t > 0$ *and Current Liabilities*$_t > 0$ *and Current Liabilities*$_{t-1} > 0$ *else* 0

4.6.6 Issuance

The Issuance metric, F_t^{ISSUE} is 0 if a stock has a rights issue over the past 12 months; otherwise it is 1.

$$F_t^{ISSUE} = 1 \text{ if rights issue over the last 12 months} \leq 0 \text{ else } 0$$

4.6.7 **Change in Gross Margin**

The change in Gross Margin metric, $F_t^{\Delta GM}$, is 1 if the change in Gross Margin from the previous to the most recent reporting period is positive and both $Sales_t$ and $Sales_{t-1}$ are positive; otherwise it is 0.

Gross Margin is the ratio of Gross Income to Sales in the most recent period.

$$GM_t = \frac{Gross\ Income_t}{Sales_t}$$

- $GM_t = GM_t - GM_{t-1}$

$$F_t^{\Delta GM} = 1 \text{ if } \Delta GM_t > 0 \text{ and } Sales_t > 0 \text{ and } Sales_{t-1} > 0 \text{ else } 0$$

4.6.8 **Change in Net Margin**

The change in Net Margin metric, $F_t^{\Delta NM}$, is 1 if the change in Net Margin from the previous to the most recent reporting period is positive and both $Sales_t$ and $Sales_{t-1}$ are positive; otherwise it is 0.

Net Margin is the ratio of Net Profit to Sales in the most recent accounting period.

$$NM_t = \frac{Net\ profit_t}{Sales_t}$$

- $NM_t = NM_t - NM_{t-1}$

$F_t^{\Delta NM} = 1$ *if* $\Delta NM_t > 0$ *and* $Sales_t > 0$ *and* $Sales_{t-1} > 0$ *else* 0

4.6.9 **Change in Operating Margin**

The change in Operating Margin metric, $F_t^{\Delta OM}$, is 1 if the change in Operating Margin from the previous to the most recent reporting period is positive and both $Sales_t$ and $Sales_{t-1}$ are positive; otherwise it is 0. Operating Margin is the ratio of Operating Income to Sales in the most recent accounting period.

$$OM_t = \frac{Operating\ Income_t}{Sales_t}$$

- $OM_t = OM_t - OM_{t-1}$

$$F_t^{\Delta OM} = 1 \text{ if } \Delta OM_t > 0 \text{ and } Sales_t > 0 \text{ and } Sales_{t-1} > 0 \text{ else } 0$$

4.6.10 Change in Asset Turnover

The change in Asset Turnover metric, $F_t^{\Delta ATO}$, is 1 if the change in Asset Turnover from the previous to the most recent reporting period is positive and both $Total\ Assets_{t-1}$ and $Total\ Assets_{t-2}$ are positive; otherwise it is 0. Asset Turnover is the ratio of Sales in the most recent period to Total Assets in the previous accounting period.

$$ATO_t = \frac{Sales_t}{Total\ Assets_{t-1}}$$

- $ATO_t = ATO_t - ATO_{t-1}$

$$F_t^{\Delta ATO} = 1 \text{ if } \Delta ATO_t > 0 \text{ and } Total\ Assets_{t-1} > 0 \text{ and } Total\ Assets_{t-2} > 0 \text{ else } 0$$

4.6.11 Change in Net Income per Employee

The change in Net Income per Employee metric, $F_t^{\Delta NIE}$, is 1 if the change in Net Income per Employee from the previous to the most recent reporting period is positive; otherwise it is 0. Net Income per Employee is the ratio of Net Income to the number of employees in the most recent accounting period.

$$NIE_t = \frac{Net\ Income\ before\ Extraordinary\ Item/Preferred\ Dividends_t}{Number\ of\ Employees_t}$$

- $NIE_t = NIE_t - NIE_{t-1}$

$F_t^{\Delta NIE} = 1$ *if* $\Delta NIE_t > 0$ *and* $Number\ of\ Employees_t > 0$ and $Number\ of\ Employees_{t-1} > 0$ *else* 0

4.6.12 Aggregate Financial and Operational Strength Score

The aggregate financial and operational strength score is the sum of the eight individual metrics for Financials and nine metrics for Non financials.

$$F_T^{Non\ financial} = F_t^{ROA} + F_t^{CFO} + F_t^{\Delta ROA} + F_t^{ACC} + F_t^{\Delta LEV} + F_t^{\Delta CR} + F_t^{ISSUE} + F_t^{\Delta GM} + F_t^{\Delta ATO}$$

$$F_T^{Financial} = F_t^{ROA} + F_t^{\Delta ROA} + F_t^{\Delta NM} + F_t^{\Delta LEV} + F_t^{\Delta CR} + F_t^{ISSUE} + F_t^{\Delta OM} + F_t^{\Delta NIE}$$

Section 5

Periodic Review of Constituents

5.0 Periodic Review of Constituents

5.1 The FTSE Global Sustainable Yield Index Series will be reviewed semi-annually in March and September using data at the close of the last business day of February and August (the data cut-off date), incorporating underlying index constituents effective from the next business day following the third Friday of March and September respectively. Thomson Reuters I/B/E/S data used in the review process is as of the third Thursday in February and August. The review will be implemented after the close of business on the third Friday in March and September.

5.2 At the semi-annual review, the companies of the FTSE Global Sustainable Yield Indexes are capped at 5 per cent using prices available on the close of the second Friday, adjusted for corporate actions to the third Friday, and constituents, shares in issue and free float after the third Friday of March and September respectively. The capping is implemented after the close of business on the third Friday in March and September.

5.3 The FTSE Global Sustainable Yield Index Series will incorporate rebalance buffers. At subsequent rebalances, a security that is not in the index will become a constituent in the index if it passes the criteria for non-constituents.

5.4 Constituents of the FTSE Global Sustainable Yield Index Series are weighted in proportion to their capped investable market capitalisation.

5.5 Criteria for Non Constituents

In order for a stock to enter the FTSE Global Sustainable Yield Index Series at the semi-annual review, it must pass the following metrics.

A. Its 12 month forward dividend yield is not missing;

AND

B. Pass the yield criteria defined in section 4.2.4 and 4.2.5, i.e. Rank below the 99th percentile in terms of excess industry yield;

AND

C. Exhibit a 12 month forward dividend yield greater or equal to the parent country index yield.

AND

D. Pass the sustainable payout ratio criteria defined in section 4.3, i.e. Exhibit a 12 month forward payout ratio below 70%;

OR

A twelve month forward payout ratio does not exceed the industry excess level by more than 30%; and

AND

E. Not have experienced an historic dividend cut defined in section 4.4;

AND

F. Not have experienced a forecast dividend cut defined in section 4.5;

AND

G. Pass the financial and operational strength score criterion (>=4) defined in section 4.6.

5.6 **Criteria for Existing Constituents**

A stock is automatically removed from the relevant index at the semi-annual review if either:

A. its 12 month forward dividend yield is missing;

OR

B. It fails either of the yield criteria detailed in sections 4.2.4 and 4.2.6 i.e. Ranks above the 99th percentile in terms of excess industry yield;

OR

C. Exhibits a 12 month forward dividend yield that is less than 80% of the parent country index yield;

OR

D. It experiences either an historic or forecast dividend cut as detailed in sections 4.4 and 4.5;

AND Fails the sustainable payout ratio criteria defined in section 4.3;

AND Fails the financial and operational strength score criterion (<4) defined in section 4.6.

Section 6

Changes to Constituent Companies

6.0 Changes to Constituent Companies

6.1 **Intra-review Additions**

6.1.1 Additions into a FTSE Global Sustainable Yield Index Series will be considered for inclusion at the next semi-annual review. The FTSE Global Sustainable Yield Index Series will not accept intra-review additions.

6.2 **Intra-review Deletions**

6.2.1 A constituent will be removed from the FTSE Global Sustainable Yield Index Series if it is also removed from its corresponding underlying index. The deletion will be concurrent with its deletion from the underlying Index and its weight will be distributed pro-rata amongst the remaining constituents in the relevant FTSE Global Sustainable Yield Index.

Section 7

Corporate Actions and Events

7.0 Corporate Actions and Events

7.1 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide for Market Cap Weighted Indexes using the following link:

Corporate_Actions_and_Events_Guide.pdf

A Corporate 'Action' is an action on shareholders with a prescribed ex date. The share price will be subject to an adjustment on the ex date. The index will be adjusted in line with the ex date.

These include the following:

- Capital Repayments
- Rights Issues/Entitlement Offers
- Stock Conversion
- Splits (sub-division) / Reverse splits (consolidation)
- Scrip issues (Capitalisation or Bonus Issue)

A Corporate 'Event' is a reaction to company news (event) that may impact the index depending on the index rules. For example, a company announces a strategic shareholder is offering to sell their shares (secondary share offer) – this could result in a free float weighting change in the index. Where an index adjustment is required FTSE will provide notice advising of the timing of the change.

7.2 **Mergers, Restructuring and Demergers**

7.2.1 If a constituent is acquired by a non-constituent, the company will be removed from the relevant FTSE Global Sustainable Yield Index and its weight will be distributed pro-rata amongst the remaining constituents.

7.2.2 If the non-constituent is added to the underlying index as a result of the stock merger or acquisition, it will be considered for inclusion at the next semi-annual review.

7.2.3 If the effect of a merger or takeover is that one constituent of the FTSE Global Sustainable Yield Index Series is absorbed by another constituent, the resulting company will remain a constituent of the index.

7.2.4 If an index constituent has a demerger and the newly spun-off company is eligible for inclusion in its underlying index, it will also be eligible for inclusion in the relevant FTSE Global Sustainable Yield Index.

7.2.5 If an index constituent has a demerger and the newly spun-off company is ineligible for inclusion in the relevant FTSE Global Sustainable Yield Index, it will remain in the index for two trading days and then be deleted at market price or if no market price is available, at zero value.

7.3 Suspension of Dealing

Suspension of dealing rules can be found within the Corporate Actions and Events Guide.

Section 8

Treatment of Dividends

8.0 Treatment of Dividends

8.1 Declared dividends are used to calculate the Standard Total Return Indexes in the FTSE Global Sustainable Yield Index Series. All dividends are applied as at the ex-div date.

8.2 A series of net of tax Total Return Indexes are also calculated based on the maximum withholding tax rates applicable to dividends received by institutional investors who are not resident in the same country as the remitting company and who do not benefit from double taxation treaties.

Withholding tax rates used in the net-of-tax indexes can be accessed using the following link: Withholding_Tax_Service

Please also refer to the FTSE Russell Withholding Tax Guide which can be accessed using the following link:

FTSE_Russell_Withholding_Tax_Guide.pdf

Section 9

Index Calculation

9.0 Index Calculation

9.1 **Calculation Frequency**

9.1.1 The FTSE Global Sustainable Yield Index Series uses actual closing mid-market or last trade prices, where available, for securities with local bourse quotations.

9.2 **Index Calculation**

9.2.1 The FTSE Global Sustainable Yield Index Series will be displayed to eight decimal points.

9.2.2 The FTSE Global Sustainable Yield Index Series 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,

- $i=1,2,\ldots,N$
- N is the number of securities in the Sustainable Yield 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 Russell 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 Russell 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.
- 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: Further Information

A Glossary of Terms used in FTSE Russell's Ground Rule documents can be found using the following link: Glossary.pdf

Further information on the FTSE Global Sustainable Yield Index Series is available from FTSE Russell. For contact details please visit the FTSE Russell website or contact FTSE Russell client services at info@ftse.com.

Website: www.ftserussell.com