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# FTSE Global Wealth Allocation (GWA) Index Series

v3.0

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## Section 1

# Introduction

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### 1.0 Introduction

1.1 This document sets out the Ground Rules for the construction and management of the FTSE Global Wealth Allocation (GWA) Index Series, calculated in association with Global Wealth Allocation Limited.

1.2 The FTSE GWA Index Series weights the constituents of the FTSE All-Share Index and the FTSE All-World Index according to the constituent's ability to create shareholder wealth measured by net profit, cash flow and book value (see Section 5). The FTSE GWA Index Series is not market capitalisation weighted, but each constituent weight is based upon its ability to create wealth.

#### 1.3 FTSE Russell

FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc. and MTSNext Limited), Mergent, Inc., FTSE Fixed Income LLC and The Yield Book Inc.

1.4 FTSE Russell hereby notifies users of the index series that it is possible that factors, including external factors 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 or investment funds which use the index series to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.5 The FTSE GWA Index Series is based on the following FTSE indexes:

Using the FTSE All-Share Index:

FTSE GWA UK Index

Using the FTSE All-World Index:

FTSE GWA US Index

FTSE GWA Japan Index

FTSE GWA Australia Index

FTSE GWA Developed Eurozone Index

FTSE GWA Asia Pacific ex Japan ex Australia ex New Zealand Index

FTSE GWA Developed Asia Pacific Index

FTSE GWA Developed Asia Pacific ex Japan Index

FTSE GWA Developed Index

FTSE GWA Developed Net of Tax Index

FTSE GWA Developed ex US Index  
FTSE GWA Developed ex Japan Index  
FTSE GWA Developed ex Australia Index  
FTSE GWA Developed ex Eurozone Index  
FTSE GWA Developed ex North America Index  
FTSE GWA Developed ex UK Index  
FTSE GWA Developed Europe Index  
FTSE GWA Developed Europe ex UK Index  
FTSE GWA Emerging Index  
FTSE GWA North America Index  
FTSE GWA Shariah Developed Index  
FTSE GWA All-World Index

Note: The FTSE All-Share Index and the FTSE All-World Index are referred to as the underlying indexes in these rules.<sup>1</sup>

- 1.6 The FTSE GWA Index Series is calculated at the end of each business day in US Dollars, Japanese Yen, Australian Dollars, Euro and Sterling. Additionally the FTSE GWA US Index will be calculated on a real-time basis every 15 seconds in US Dollars.
- 1.7 Capital and Total Return indexes are calculated.
- 1.8 **These Ground Rules**
  - 1.8.1 This document sets out the Ground Rules for the construction and maintenance of the FTSE Global Wealth Allocation Index Series.
  - 1.8.2 Unless contained in these Ground Rules, all other areas of the methodology relating to the FTSE GWA Index Series are governed by the Ground Rules of the relevant underlying FTSE Index. These Ground Rules should therefore be read in conjunction with the Ground Rules of the relevant underlying FTSE indexes (see Appendix A for contact details).
  - 1.8.3 Unless specifically detailed in this document, all areas of the methodology regarding the management of the FTSE GWA Index Series are related to the FTSE Global Equity Index Series Ground Rules. The FTSE GWA Index Series methodology should therefore be read in conjunction with the FTSE Global Equity Index Series Ground Rules. For further explanations on the Shariah methodology, please refer to the FTSE Shariah Global Equity Index Series Ground Rules. These rules are available on [www.ftserussell.com](http://www.ftserussell.com).

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<sup>1</sup> Saudi Arabia was assigned Secondary Emerging market status in March 2019. Securities will be eligible for inclusion in the FTSE Global Wealth Allocation Index Series from September 2019.

China A Shares (available under the Northbound China Stock Connect Scheme) was assigned Secondary Emerging market status beginning in June 2019. Securities will be eligible for inclusion in the FTSE Global Wealth Allocation Index Series from September 2019.



## Section 2

# Management Responsibilities

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## 2.0 Management Responsibilities

### 2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series.<sup>2</sup>

2.1.2 FTSE is responsible for the daily calculation, production and operation of the FTSE GWA Index Series and will:

- maintain records of the index weightings of all constituents;
- make changes to the constituents and their weightings in accordance with the Ground Rules;
- apply the changes resulting from the reviews as required by the Ground Rules;
- publish changes to the constituent weightings resulting from their ongoing maintenance and the periodic reviews;
- disseminate the indexes.

### 2.2 Global Wealth Allocation Limited (GWA)

2.2.1 GWA is responsible for the calculation of the quarterly reviews of the FTSE GWA Index Series. For each FTSE GWA Index, GWA builds wealth-weighted portfolios; see Section 5 for further details. These portfolios are rebalanced on a quarterly basis to be synchronised to the underlying FTSE quarterly reviews. The new wealth adjustment factor for each constituent is derived from the portfolio weights that GWA supply to FTSE on a quarterly basis.

### 2.3 Amendments to these Ground Rules

2.3.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they continue to best reflect the aims of the index series. Any proposals for significant amendments to these Ground Rules will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Product Governance Board before approval is granted.

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<sup>2</sup> The term administrator is used in this document in the same sense as it is defined in [Regulation \(EU\) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds](#) (the European Benchmark Regulation).

2.3.2 As provided for in the Statement of Principles for FTSE Russell Equity Indexes, 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. 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.



## Section 3

# FTSE Russell Index Policies

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### 3.0 FTSE Russell Index Policies

These Ground Rules should be read in conjunction with the following policy documents which can be accessed using the links below:

#### 3.1 Corporate Actions and Events Guide

- 3.1.1 Full details of changes to constituent companies due to corporate actions and events can be accessed in the Corporate Actions and Events Guide using the following link:

[Corporate Actions and Events Guide.pdf](#)

#### 3.2 Statement of Principles for FTSE Russell Equity Indexes (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 the FTSE Russell Product Governance Board.

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

[Statement of Principles.pdf](#)

#### 3.3 Index Policy for Trading Halts and Market Closures

- 3.3.1 Guidance for the treatment of index changes in the event of trading halts or market closures can be found using the following link:

[Index Policy for Trading Halts and Market Closures.pdf](#)

#### 3.4 Index Policy in the Event Clients are Unable to Trade a Market

- 3.4.1 Details of FTSE Russell's treatment can be accessed using the following link:

[Index Policy in the Event Clients are Unable to Trade a Market.pdf](#)

### 3.5 **Recalculation Policy and Guidelines**

- 3.5.1 The FTSE Global Wealth Allocation Index Series are recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE Global Wealth Allocation 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@ftserussell.com](mailto:info@ftserussell.com).

[Recalculation Policy and Guidelines Equity Indexes.pdf](#)

### 3.6 **Policy for Benchmark Methodology Changes**

- 3.6.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

[Policy for Benchmark Methodology Changes.pdf](#)





## Section 4

# Eligible Securities

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### **4.0 Eligible Securities**

- 4.1 Constituents of the FTSE All-Share Index and FTSE All-World Index are eligible for inclusion in the FTSE GWA Index Series.
- 4.2 The constituents of the FTSE GWA Index Series will match exactly the constituents of the underlying FTSE Index.

## Section 5

# Periodic Review of Constituents

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### 5.0 Periodic Review of Constituents

5.1 The FTSE GWA Index Series will be reviewed quarterly based on data as at the close of business on the Tuesday before the first Friday of March, June, September and December, taking into account any additions and deletions in the underlying indexes.

5.2 At the quarterly review the wealth adjustment factor is calculated, and is applied to the investable market capitalisation of each constituent (see details below). Changes arising from the quarterly review will be implemented after the close of business on the third Friday (i.e. effective Monday) of March, June, September and December.

5.3 The wealth creation of a company is defined in terms of the following three measures, as found in a company's profit and loss account, and balance sheet:

Net Profit, Cash Flow, Book Value = Wealth Creation

5.4 If a company has more than one stock issue or a stock issue has more than one listing in the index, a wealth measure will be applied to each stock issue/listing.

#### 5.5 Sub Portfolio Construction

5.5.1 The first step of constructing the Wealth Portfolio is to build a sub portfolio for each of the three wealth measures.

5.5.2 As individual wealth proxies are a partial view of a company's wealth, the most extreme values are trimmed to maintain a broad perspective on a company's wealth.

5.5.3 For portfolio construction, GWA converts the local currency wealth to US dollars using the spot exchange rate.

5.5.4 The sub portfolio weights are constructed by dividing each company's wealth measure by the sum of the wealth measures for that index. Section 7 shows formulae for this step in more detail.

5.5.5 If a company does not report a wealth measure, it enters that sub portfolio at its weight in the underlying FTSE Index (market capitalisation weighted index).

5.5.6 The sub portfolios are long only. Companies reporting negative wealth measures will have a zero weight in that sub portfolio.

#### 5.6 Wealth Portfolio Construction

5.6.1 The final step in Portfolio Construction is to build the Wealth Portfolio from the three sub portfolios.

5.6.2 The Wealth Portfolio weights are the average of the three sub portfolio weights.

## 5.7 **Wealth Adjustment Factor**

5.7.1 In order to simplify construction of the FTSE GWA Index Series, it is convenient to make use of the ratio of the independently developed wealth portfolio weight to the underlying index weight. This ratio is defined as the Wealth Adjustment Factor and is usually constant for each company between rebalancing dates in the FTSE All-Share Index and FTSE All-World Index.

5.7.2 The Wealth Adjustment Factor is used by FTSE to make the necessary changes to the appropriate FTSE GWA Index weights following mergers and other corporate events.

## 5.8 **Treatment of Multiple Classes of Shares**

5.8.1 Wealth is measured at the company level and divided between the different classes of shares issued by the company.

5.8.2 When a company has multiple classes of shares which are all present in the same FTSE GWA Index, GWA allocates the wealth measured for a company between the share classes that own this wealth in proportion to the market capitalisation of the different classes of shares.

5.8.3 When a company has multiple classes of shares, not all of which appear in the FTSE GWA Index, the total wealth is split between the classes of shares in the ratio of their market capitalisation.

## 5.9 **Treatment of Dual Listed Companies**

5.9.1 Dual listed companies consist of two entities that exist as separate companies, but operate as a combined group. GWA allocates the wealth of the combined group to each separate company according to the ratio of their market capitalisation.



## Section 6

# Changes to Constituent Companies

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### **6.0 Changes to Constituent Companies**

#### **6.1 Additions Including New Issues**

6.1.1 When a new issue is added to an underlying index its index eligibility for the FTSE GWA index will be assessed at the next quarterly review.

#### **6.2 Deletions**

6.2.1 If a constituent is removed from the underlying index, the constituent will also be removed from the relevant FTSE GWA Index. The removal will be concurrent with its removal from the relevant underlying index.

## Section 7

# Corporate Actions and Events

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### 7.0 Corporate Actions and Events

If a constituent in the underlying index has a stock split, stock consolidation, rights issue, bonus issue, a change in the number of shares in issue or a change in free float, the constituent's weighting in the FTSE GWA Index will remain unchanged pre and post such an event until the next quarterly review.

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

[Corporate Actions and Events Guide for Non Market Cap Weighted Indexes.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.

#### 7.1 Suspension of Dealing

Suspension of Dealing rules can be found within the Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indexes.

#### 7.2 Mergers and Take-overs

The treatment of takeovers, mergers and demergers can be found within the Corporate Actions and Events Guide for Non Market Capitalisation Weighted Indexes.

## Section 8

# Index Calculation Methodology

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### 8.0 Index Calculation Methodology

#### 8.1 Index Review Calculation

- 8.1.1 Once the three wealth measurements have been obtained (see Section 5), the corresponding sub-portfolio is constructed as follows (for clarity, the formula for Book Value is shown; the other sub-portfolios are congruent).
- 8.1.2 If every company has reported a Book Value, and it is positive, then the Book Value sub-portfolio weight, Pi<sup>BV</sup> for company i is given by:

$$P_i^{BV} = \frac{BV_i \times f_i}{\sum_j BV_j \times f_j}$$

Where:-

$BV_i$  = the most recent reported book value applicable to stock i in US dollars.

$f_i$  = the investability weight for security i (i.e. the free-float weight).

- 8.1.3 In general, not every company will have all wealth measures available. To describe this, we define an indicator function I<sub>i</sub><sup>BV</sup> where I<sub>i</sub><sup>BV</sup> = 1 if book value is available for company i and I<sub>i</sub><sup>BV</sup> = 0 otherwise. Further, to keep the portfolio long only, negative wealth measures are set to zero. For the Book Value sub-portfolio this allows:

$$P_i^{BV} = I_i^{BV} \times \frac{\text{Max}(BV_i, 0) \times f_i}{\sum_j I_j^{BV} \times \text{Max}(BV_j, 0) \times f_j} \times \frac{\sum_k I_k^{BV} \times MC_k}{\sum_l MC_l} + (1 - I_i^{BV}) \times \frac{MC_i}{\sum_m MC_m}$$

Where:-

$MC_i$  = the market capitalisation of stock i after the application of any investability weighting in US dollars.

- 8.1.4 In this way, companies without reported wealth measures exist in the index at their investability-adjusted market capitalisation weight, at exactly the same weight as the underlying FTSE index.
- 8.1.5 To convert the sub-portfolios to the wealth-weighted portfolio, Pi, we take the average:

$$P_i = \frac{P_i^{BV} + P_i^{CF} + P_i^{NP}}{3}$$

Where:-

$P_i^{BV}$  = the Book Value sub portfolio weight.

$P_i^{CF}$  = the Cash Flow sub portfolio weight.

$P_i^{NP}$  = the Net Profit sub portfolio weight.

8.1.6 For convenience in converting between mandates, we define a wealth adjustment factor  $c_i$  as follows ( $c_i$  is constant across indexes and through time between rebalancing):

$$c_i = \frac{P_i}{iw_i}$$

Where:-

$iw_i$  = The securities weight in the underlying index:

## 8.2 Index Calculation

8.2.1 Calculation of the FTSE GWA Index Series is carried out by way of the wealth adjustment factor,  $c_i$ . This factor adjusts the investable market capitalisation of the constituent to take into account the wealth creation for each constituent.

Thus:-

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

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 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 Wealth Adjustment 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 Russell 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

# Definitions of Wealth

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### 9.0 Definitions of Wealth

9.1 The sources for the wealth measurement data include data provided by a multitude of databases, and in some cases, individual company annual reports.

**Cash Flow** - The measure of profitability of the company's assets on a cash basis. It is the sum of net profit and all non-cash charges or credits. It includes, but is not restricted to, depreciation, amortisation of intangibles and deferred taxes, and it excludes extraordinary items and changes in working capital.

**Net Profit** - The second measure of profitability is net profit after tax. Net profit is income after operating and non-operating expense, reserves, income taxes, and minority interest but before extraordinary items, preferred dividends and common dividends.

**Book Value** - A rough proxy for the liquidation value or replacement cost, the Balance Sheet value of a company is broadly defined as the total assets minus the total liabilities.

From the March 2013 rebalance, the Book Value wealth proxy evolved to better reflect the wealth creating assets of the company.

Although Unadjusted Book Value provides a rough proxy for the wealth stock of a company, there are elements of wealth that it may not fairly reflect. For example:

- Companies invest in Research & Development to generate future income and it is therefore part of a company's wealth. Unadjusted Book Value would not reflect this wealth when R&D expenditures are expensed.
- A company's wealth includes Intellectual Property, Business Relationships and Branding which may not be included in Unadjusted Book Value where they have not been explicitly acquired.
- Balance sheets tend to reflect the historical cost of assets. If these assets have become unproductive, impaired or obsolete, the historical cost may overstate the company's wealth.

The adjusted book value considers non-capitalised items and the value of the excess profit that the firm generates after charging for the capital used in its generation.

For more information on the Adjusted Book Value, please contact:  
 Clientservice (ClientService@globalwealthallocation.com)





## Appendix A: Further Information

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

[Glossary.pdf](#)

For further information on the FTSE Global Wealth Allocation Index Series Ground Rules visit [www.ftserussell.com](http://www.ftserussell.com) or e-mail [info@ftserussell.com](mailto:info@ftserussell.com).

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