

FTSE TWSE RAFI Taiwan Index Series

v2.5



**FTSE
RUSSELL**
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Section 1

Introduction

1. Introduction

- 1.1 This document sets out the methodology for the construction and management of the FTSE TWSE RAFI Taiwan 50 Index and FTSE TWSE RAFI Taiwan 100 Index, which is calculated in association with Research Affiliates.
- 1.2 FTSE TWSE RAFI Taiwan 50 Index will consist of the Top 50 Taiwan companies with the largest RAFI fundamental values, selected from the FTSE Global Equity Index Series excluding the stocks that are listed on FTO – Taiwan (Taipei OTC).
- 1.3 FTSE TWSE RAFI Taiwan 100 Index will capture the performance of the next 100 Taiwan companies, outside the FTSE TWSE RAFI Taiwan 50 Index with the largest RAFI fundamental values, selected from Global Equity Index Series excluding the stocks that are listed on FTO – Taiwan (Taipei OTC).
- 1.4 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index weights its constituents using specific fundamental factors, rather than market capitalisation. Therefore at review constituent weights are not based on price valuations established by the market.
- 1.5 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index are calculated in real time and disseminated every 15 seconds.
- 1.6 The FTSE TWSE RAFI Taiwan Index Series does not take account of ESG factors in its index design.
- 1.7 A price index is calculated in TWD in real time. Capital and total return indices are calculated in USD at the end of the day, using WM/Refinitiv Spot Rates.
- 1.8 Unless specifically detailed in this document, all areas of the methodology regarding the management of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index are in line with the FTSE RAFI Index Series Ground Rules. The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index methodology should therefore be read in conjunction with the FTSE RAFI Index Series Ground Rules. These rules are available on www.lseg.com/en/ftse-russell/.
- 1.9 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index have a starting value of 5,000, as at 26 March 2008.
- 1.10 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 FTSE Fixed Income Europe Limited), FTSE Fixed Income LLC, FTSE (Beijing) Consulting Limited, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings.
- 1.11 FTSE Russell hereby notifies users of the index 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 and therefore, any financial contracts or other financial instruments that reference the index or investment funds which use the index to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index.

- 1.12 Index users who choose to follow this index or to buy products that claim to follow this index 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 (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:
- any reliance on these Ground Rules;
 - any inaccuracies in these Ground Rules;
 - any non-application or misapplication of the policies or procedures described in these Ground Rules; and/or
 - any inaccuracies in the compilation of the index or any constituent data.

Section 2

Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series¹.

2.1.2 FTSE is responsible for the daily calculation, production and operation of the index series and will:

- maintain records of the index weightings of all constituents and reserve companies;
- make changes to the constituents and their weightings in accordance with the Ground Rules;
- carry out the periodic index reviews of the index series and 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 review; and
- disseminate the indices.

2.2 Research Affiliates (RAFI)

2.3 Research Affiliates is responsible for calculating the RAFI fundamental value of companies based on FTSE's universes at the annual review.

2.4 Amendments to these Ground Rules

2.4.1 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 Index Governance Board before approval is granted.

2.5 As provided for in the Statement of Principles for FTSE Russell Equity Indices, 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 Rules should subsequently be updated to provide greater clarity.

¹ 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) and [The Benchmarks \(Amendment and Transitional Provision\) \(EU Exit\) Regulations 2019](#) (the UK Benchmark Regulation).

Section 3

FTSE Russell index policies

3. 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 Indices (the Statement of Principles)

3.2.1 Indices 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 Index Policy Advisory Board for discussion before approval by the FTSE Russell Index Governance Board.

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

[Statement of Principles.pdf](#)

3.3 Queries and Complaints

3.3.1 FTSE Russell's complaints procedure can be accessed using the following link:

[Benchmark Determination Complaints Handling Policy.pdf](#)

3.4 Index Policy for Trading Halts and Market Closures

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](#)

3.5 Index Policy in the Event Clients are Unable to Trade a Market or a Security

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 or a Security.pdf](#)

3.6 Recalculation Policy and Guidelines

3.6.1 Where an inaccuracy is identified, FTSE Russell will follow the steps set out in the FTSE Russell Index Recalculation Guidelines when determining whether an index or index series should be recalculated and/or associated data products reissued. Users of the FTSE TWSE RAFI Taiwan Index Series will be 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.

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

3.7 Policy for Benchmark Methodology Changes

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

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

3.8 FTSE Russell Governance Framework

3.8.1 To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks², the European benchmark regulation³ and the UK benchmark regulation⁴. The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework.pdf](#)

3.9 Real Time Status Definitions

3.9.1 For indices which are calculated in real time, please refer to the following guide for details of real time status definitions:

[Real Time Status Definitions.pdf](#)

² IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

³ 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.

⁴ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

Section 4

Eligible securities

4. Eligible securities

- 4.1 The universe of eligible constituents is all the Taiwan securities that are current constituents of the FTSE Global Equity Index Series and listed on the Main Board of the Taiwan Stock Exchange. Stocks listed on the Taipei Exchange will not be eligible. Additionally, Altered-Trading-Method (Full Delivery) Stocks are not eligible to be included in the FTSE TWSE RAFI Taiwan Index Series. (See Appendix B for definition of Altered-Trading-Method Stocks.)
- 4.2 FTSE TWSE RAFI Taiwan 50 Index**
- 4.2.1 The FTSE TWSE RAFI Taiwan 50 Index will consist of the top 50 Taiwan companies with the largest RAFI fundamental values that qualify under section 4 as eligible for inclusion in the index.
- 4.3 FTSE TWSE RAFI Taiwan 100 Index**
- 4.3.1 The FTSE TWSE RAFI Taiwan 100 Index will capture the performance of the next 100 Taiwan companies outside the FTSE TWSE RAFI Taiwan 50 Index with the largest RAFI fundamental values that qualify under section 4 as eligible for inclusion in the index.

Section 5

Annual review of constituents

5. Annual review of constituents

5.1 Index qualification criteria

- 5.1.1 To be included in the index, a stock must pass free float and liquidity criteria.
- 5.1.2 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index will follow the same index qualification criteria as defined in FTSE Global Equity Index Series. Please refer to the FTSE Global Equity Index Series Ground Rules for more information. These rules are available on www.lseg.com/en/ftse-russell/.

5.2 Periodic review of constituent companies

- 5.2.1 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index will be reviewed annually in March based on data as at the close of business on the Monday four weeks prior to the review effective date, taking into account any additions and deletions planned in the underlying indices.
- 5.2.2 Changes arising from the annual review will be implemented after the close of business on the third Friday of March each year (i.e. effective Monday).
- 5.2.3 The review of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index, and the calculation of the fundamental weighting of a company is carried out as follows, using the following factors as found in a company's annual returns:
 - A. Sales = company sales averaged over the prior five years.
 - B. Cash flow = company cash flow averaged over the prior five years.
 - C. Book value = company book value at the review date.
 - D. Dividends = total dividend distributions averaged over the last five years.
- 5.2.4 The fundamental value is calculated for each company, rather than for individual securities issued by the company. Where a single company is represented by two or more lines of stock, the company's fundamental value is allocated between these lines of stock in proportion to their free float-adjusted market capitalisations as of the date of the rebalancing.
- 5.2.5 Fundamental data that is not yet available and/or cannot be derived from pre-existing companies – for example, companies such as recent listings or recently merged companies or investment entities that do not report the necessary fundamental values – will be ineligible for the FTSE RAFI Index review.

5.3 Steps for conducting a review

- A. The underlying universe for the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index is the FTSE Global Equity Index Series excluding Taipei Exchange and Altered-Trading-Method (Full Delivery) Stocks (see Appendix B).
- B. Stocks are then ranked in descending order by their RAFI company fundamental value. For more information on the calculation of the RAFI company fundamental value please, refer to the FTSE RAFI Index Series Ground Rules. These rules are available on www.lseg.com/en/ftse-russell/.
- C. The top 50 companies by RAFI company fundamental value are selected for the FTSE TWSE RAFI Taiwan 50 Index. The next 100 companies by RAFI company fundamental value are selected for the FTSE TWSE RAFI Taiwan 100 index.
- D. Constituents are weighted within the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index by their investable RAFI fundamental value rather than their investable market capitalisation.
- E. To calculate the FTSE RAFI adjustment factor, FTSE divides the investable RAFI fundamental value of each constituent by its investable market capitalisation as at the close of business on the last trading day of February. This is the weighting factor used in the FTSE RAFI Index Series calculation. Please refer to section 7 for more information regarding the FTSE RAFI Index Series calculation.

Section 6

Changes to constituent companies

6. Changes to constituent companies

6.1 New issues

6.1.1 The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index will not have intra-review additions and new issues will be reviewed for index inclusion at the next March annual review, in line with the FTSE RAFI Index Series. When a constituent is added to the universe, it will therefore be considered for inclusion at the next annual review of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index.

6.2 Deletions

6.2.1 If a constituent is removed from the underlying index universe i.e. the FTSE Global Equity Index Series, the constituent will be removed from the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index. The number of constituents for both the indices is not fixed and it may vary between annual reviews in line with the FTSE Global Equity Index Series. If an index constituent is deleted, the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index would have less than 50 and 100 constituents respectively.

6.3 Splits/demergers

6.3.1 If a constituent splits and forms two or more companies and any of the new entities are retained in the underlying universe, those new entities will be retained in the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index with the same FTSE RAFI adjustment factor as their parent company until the next periodic review. The FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index may have more than 50 and 100 constituents respectively after review only if a constituent company is split and forms two or more companies by issuing new equity to existing shareholders. The resulting companies will be eligible to continue to be included in the index.

6.4 Mergers/takeovers

6.4.1 Mergers/takeovers between constituents

If an existing constituent is acquired for eligible shares or a combination of eligible shares and cash by another constituent, the constituent being acquired is deleted on the effective date of the acquisition. The enlarged company will remain a constituent of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index with its FTSE RAFI adjustment factor recalculated.

- A. Where the existing company is acquired for eligible shares only, the FTSE RAFI adjustment factor is recalculated to take into account the terms of the merger.
- B. Where the existing company is acquired for a combination of eligible shares and cash the FTSE RAFI adjustment factor is recalculated to take into account the terms of the merger minus the cash component.

6.4.2 Mergers/takeovers between a constituent and a non-constituent

- A. If an existing constituent is acquired by a non-constituent for stock and the non-constituent is added to the underlying FTSE universe index (see section 4 eligible securities), the non-constituent will be added as a constituent of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index with its FTSE RAFI adjustment factor recalculated to take into account the terms of the merger.
- B. The enlarged company will remain a constituent of either the FTSE TWSE RAFI Taiwan 50 Index or the FTSE TWSE RAFI Taiwan 100 Index with its FTSE RAFI adjustment factor unchanged only if the RAFI fundamental value is not available for the non-constituent.
- C. If the event involves cash only, the constituent will be deleted and the non-constituent will not be added.

6.5 Altered-Trading-Method (Full Delivery) Stocks

- 6.5.1 If a constituent changes status to an Altered-Trading-Method Stock, it will normally be deleted from the FTSE TWSE RAFI Taiwan 50 Index or the FTSE TWSE RAFI Taiwan Mid-Cap 100 Index at the next quarterly review and it will only be reconsidered for index inclusion at the next annual review after a period of 12 months from its deletion subject to it no longer being classified as an Altered-Trading-Method Stock.

Section 7

Index algorithm and calculation method

7. Index algorithm and calculation method

- 7.1 The FTSE RAFI Fundamental value for each stock is applied to the calculation by way of the FTSE RAFI adjustment factor, c_i . This factor adjusts the conventional investable market capitalisation of the constituent to the FTSE RAFI fundamental weight of the constituent. It is calculated by dividing the FTSE RAFI fundamental value (company level) for each stock by its free float adjusted market capitalisation at review.
- 7.2 The application of the FTSE RAFI adjustment factor to the conventional investable market capitalisation ensures that any actions that may impact the price of a constituent (such as rights or scrip issues) are accounted for.

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

Where:

- $i = 1, 2, \dots, N$;
- N is the number of securities in the index;
- p_i is the latest trade price of the component security (or the price at the close of the index on the previous day);
- e_i is the exchange rate required to convert the security's currency into the index's base currency;
- s_i is the number of shares in issue used by FTSE for the security, as defined in these Ground Rules;
- f_i is the investability weighting factor to be applied to a security to allow amendments to its weighting, expressed as a number between 0 and 1, where 1 represents a 100% free float. This factor is published by FTSE for each security in the underlying index;
- 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;
- c_i is $\frac{\text{RAFI fundamental value} \times \text{investability weighting}}{\text{price} \times \text{shares} \times \text{investability weighting}}$.

Appendix A

Index and market opening and closing hours

| Index | Open | Close |
|---------------------------------|-------|-------|
| FTSE TWSE RAFI Taiwan 50 Index | 01:00 | 05:35 |
| FTSE TWSE RAFI Taiwan 100 Index | 01:00 | 05:35 |

Timings are UK hours.

Notes: WM/Refinitiv Closing Spot Rates™ compiled by The WM Company are used.

Appendix B

Market and stock exchange

Market and stock exchange

1. The FTSE TWSE RAFI Taiwan Index Series consists of the companies that trade on the Taiwan Stock Exchange.
2. Altered-Trading-Method (Full Delivery) Stocks: when a company has financial or operation problems, the stocks are required of altering trading method as full delivery. That is, when receiving orders to trade stocks listed under the alter-trading-method category, securities brokers shall take full delivery of the proceeds (if buy) or stocks (if sell) before making trading quotes. The competitive auction for stocks listed under the altered-trading-method category shall without exception be conducted. The settlement cycle becomes T+0 instead of T+2.

For further information about Altered- Trading-Method Stock, please see article 49 of the operating rules of the Taiwan Stock Exchange Corporation, available on:

<http://eng.selaw.com.tw/LawArticle.aspx?LawID=FL007304&ModifyDate=1110428>

Or visit the Taiwan Stock Exchange Corporation Regulations Governing Trading of Stocks in the Altered-Trading-Method Category, available on: <http://eng.selaw.com.tw/FLAWDAT01.asp?lsid=FL007123>

Market eligible for the FTSE TWSE RAFI Taiwan Index Series

| Region | Market | Exchange location | Market section |
|--------------|--------|-------------------|-----------------------------------|
| Asia/Pacific | Taiwan | Taipei | Taiwan Stock Exchange, Main Board |

Appendix C

Status of index

Status of index

Calculation states

Price indices will be calculated on a real-time basis every 15 seconds in TWD for FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index.

For further details of real-time definitions, please refer to the following guide:

[Real Time Status Definitions.pdf](#)

The official opening and closing hours of the FTSE TWSE RAFI Taiwan 50 Index and the FTSE TWSE RAFI Taiwan 100 Index are set out in Appendix A. Variations to the official hours of the indices will be published by FTSE Russell.

Appendix D

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 TWSE RAFI Taiwan Index Series is available from FTSE Russell and the Taiwan Stock Exchange.

To contact FTSE Russell, please visit the FTSE Russell website at www.lseg.com/en/ftse-russell/ or contact FTSE Russell via e-mail at info@ftserussell.com.

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