Corporate Action Methodology

FR Global Equity Indices

v1.1

The FR Global Equity Indices are not, and are not intended to be, used by supervised entities in the European Union or the United Kingdom and accordingly, the European benchmark regulation* and the UK Benchmark Regulation# do not apply to the index. Consequently, supervised entities within the European Union and the United Kingdom are not permitted to use the index as a benchmark as set out in article 3(1)(7) of the European benchmark regulation.

For the avoidance of doubt, neither FTSE International Limited nor Refinitiv Benchmark Services (UK) Limited nor any other member of the London Stock Exchange Group plc group of companies, is the benchmark administrator (as defined in article 3(1)(6) of the European benchmark regulation) of the indices.

*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

#<u>The Benchmarks (Amendment and Transitional Provision) (EU Exit)</u>
Regulations 2019 (which amends the European benchmark regulation in the United Kingdom



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1. Introduction

- 1.1 This methodology document details the guiding principles laid down by our index research experts for the treatment of corporate actions that affect FR Equity and FTSE Indices¹.
- 1.2 LSEG recognises the importance of understanding how adjustments are made in order to maximise the benefits of using FR Indices for benchmarking, investment analysis, and portfolio construction.

2. FTSE Russell

- 2.1 As part of the ongoing work to simplify its brand, London Stock Exchange Group (LSEG) announced that Refinitiv Benchmarks and Indices were moving to FTSE Russell branding with effect from November 2023. As part of the rebranding, the Refinitiv Global Equity Indices alongside Corporate Action Methodology applicable to these indices were renamed as the FR Global Equity Indices and their Corporate Action Methodology
- 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, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings S.A.S.
- 2.3 LSEG holds a unique position within the global financial market, operating connected businesses to serve customers across the financial markets value chain.
- 2.4 The FR Global Equity Indices are calculated by FTSE Russell and will be made available to customers as part of their desktop licence through the LSEG Data & Analytics Platforms or subject to a separate licence agreement.
- 2.5 Neither FTSE International Limited nor Refinitiv Benchmark Services (UK) Limited nor any other member of the London Stock Exchange Group plc group of companies, is the benchmark administrator² of the FR Global Equity Indices.

Corporate Actions

3.1 Cash dividend

A cash dividend is a distribution of wealth to the shareholders of a company, made from the earnings during a period (year, half year, or quarter). For index calculation purposes, regular dividends will affect Total Return indices only and not the Price Return indices.

The impact of a dividend is significant on total return indices. "Total Return" is the result of reinvesting all dividends back into the index or portfolio. In the short term, the contribution of dividends to the total return performance may not be visible. Over time, however, the difference in accumulated wealth is significant due to reinvestment of income.

The level of the total return index is adjusted according to the amount of dividends paid in by index constituent companies. When a company issues a dividend, the price of the equity drops in the exact amount of the per share dividend amount. Leaving aside subsequent market movements of the equity price, the direct impact of a dividend upon an index is a drop in the price of the index. However, the total return index is adjusted for the issuance of dividends by reinvesting them. In most cases, the gross dividend

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¹ The Index Committee is the governing body responsible for ensuring that the index adheres to the rules outlined in the methodology. The committee is also responsible for determining the treatment of uncommon events not covered in this document.

² As the term administrator is defined in the <u>IOSCO Principles for Financial Benchmarks</u> and <u>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 <u>The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019</u> (the UK Benchmark Regulation).</u>

amount will be reinvested on the ex-date in the Total Return indices (there are some exceptions to this rule due to local market conventions)³.

The total return index is computed as follows:

$$Index \ Price_{t} = \frac{\sum_{i=1}^{n} (p_{i,t} \ X \ q_{i,t} \ X \ r_{i,t}) + (Div_{i,t} \ X \ q_{i,t} \ X \ r_{i,t})}{Divisor_{t}}$$

Where:

 $p_{i,t} = price \ of \ equity \ i=1,2,...,n, at \ time \ t=0,1,2,...,T$

n = the number of equities in the index

 $q_{i,t}$ = shares held in Index for equity i at time t

 $r_{i,t}$ = exchange rate from local currency to index currency for equity i at time t

 $Div_{i,t} = per share dividend on ex-date$

All quantities in the equation above are end-of-day quantities. The numerator is computed as per the exdate for any dividends. The divisor is also adjusted for total return indices on the day following the dividend ex-date to ensure that the index doesn't fall back down to previous levels (prior to dividend ex-date). This adjustment is done by calculating an adjusted market cap for the total return index immediately after the dividend ex-date. The adjusted market cap is the price only market cap as on the dividend ex-date (i.e., excluding index dividend). Once this is divided by the total return index value as on dividend ex-date, we get an adjusted divisor which is used for calculations from the next day onwards.

Further information about the index formulas that are used in the total return calculations can be found in the FR Global Equity Index Methodology document, available here.

3.2 Special dividend

A special dividend is a non-recurring distribution of profit to shareholders, usually in the form of cash. A special dividend is usually larger when compared to normal dividends paid out by the company. Typically, special dividends are distributed if a company has exceptionally strong earnings that it wishes to distribute to shareholders or if it is making changes to its financial structure, such as spin-offs or changes in debt ratio.

For index calculation purposes, a special dividend may result in stock prices being adjusted (reduced) by the payment amount. Although it is general practice to treat all special dividends like a cash dividend, when special dividends exceed 20% of the Close Price, the event (Capital Return) is executed with a price and divisor adjustment.

The decision for special handling sits with the FR Global Equity Indices' Index Action Committee where dividend size and company market cap are critical parameters considered. It is important to note that the number of incidents when additional adjustments have been necessary have been very rare.

When executed as a Capital Return the adjustment factor and adjusted price are calculated as:

Adjusted Price = P(t) - Cash

Adjusted Price Factor = Adjusted Price/P(t)

Where P(t) = Price on Ex-Date

3.3 Cash dividend with stock alternative

Shareholders may be granted cash dividends with stock alternative options. In these cases, the shareholder can elect to receive either in cash or in stock. As a default option, for FR Global Equity Indices, it is always assumed that investors will always elect cash and treat these events as Cash Dividends.

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The appendices provide detailed descriptions for special dividend withholding rules for United Kingdom, Belgium, Australia, and New Zealand. There are also appendix sections for forecasted dividends. It is important to understand these special cases when tracking how dividends are handled in return indices.

3.4 Stock dividend

A stock dividend is an event in which a corporation distributes a payment to shareholders in the form of shares of stock, as opposed to money, while increasing the number of shares. For this type of events, An adjustment factor is created that is applied to the price of the shares, while the inverse of that factor is applied to the number of shares. The treatment of stock dividends is similar to stock splits, except that stock dividends are quoted in terms of the percentage of shares received to those held. Shareholders receive B(i) new shares for equity I (denoted B below) for every A(i) shares held (denoted A below). A 10% stock dividend is the same as a 1.10 for 1 stock split with an adjustment factor of 1.10.

The treatment of a Stock Dividend is the following:

```
Adjusted Price = Closing Price * A/(A+B)

New Number of Shares = Old Number of Share * (A+B)/A
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Companies can also offer "optional" stock dividends where shareholders can opt for new stocks or cash. When stock dividends are offered in alternative to cash, it is always assumed that investors will always elect cash and treat these events as Cash Dividends.

3.5 Stock splits

A Stock Split takes place when a company decides to increase the amount of its outstanding shares while decreasing the nominal share price proportionally, thus keeping the market capitalisation of the company constant. A company with 10,000 shares trading at \$100 can split into 20,000 shares of \$50, without impacting the overall market capitalisation. The common objective of the company with performing a stock split is to increase the overall liquidity and appeal for small investors (that can more easily afford shares if the cost is lower).

The treatment of a stock split is the following:

```
Adjusted Price = Closing Price * A/B
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New Number of Shares = Old Number of Shares * (B/A)

Note: It is assumed that shareholders receive B(i), new shares for equity i (denoted B above) for every A(i) shares held (denoted A above).

3.6 Consolidations (or reverse splits)

This event may also be referred to as a "Reverse Stock Split", as it is the exact opposite of a stock split. In a reverse split the company decides to decrease the amount of its outstanding shares while at the same time increasing the share price proportionally, keeping the market capitalisation unchanged.

A reverse split will result in all shareholders holding fewer shares in the company. However, the stake of each shareholder in the company will remain the same and the nominal value per share will increase. Each new consolidated share will carry the same rights as the pre-reverse-split shares, including voting rights and dividend entitlements.

The adjustment factor is calculated just like in the stock split.

Example: 1 for 4 reverse stock split for company XYZ. Before the reverse split XYZ had 1,000,000 outstanding shares with a nominal value per share of EUR 0.50. After the Reverse Split the company will have 250,000 outstanding shares, with a nominal value per share of EUR 2.00. The total market cap of the company remained constant, EUR 500,000.

3.7 Bonus issue (or scrip issues)

In a Bonus Issue, shareholders are awarded additional securities free of any payment. It is sometimes referred to as "Scrip Issue" or "Capitalisation Issue" and is effectively a free issue of shares paid for by the

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company issuing the shares out of capital reserves. The treatment of Bonus Issues is similar to Stock Splits or Stock dividends.

Example: Company ABC calls a 1 for 4 Bonus Issue, for every four shares that shareholders own in ABC they will receive one additional free share – i.e., shareholders will own 5 shares of ABC plc after the corporate event. The number of shares issued increases by 25%. The issued share capital increases by 25%, although this is offset by the reduction in the capital reserves. The share price adjusts proportionately; if the market price was \$100 before the issue, it will adjust to \$80 as the number of shares has increased.

3.8 Right offerings (or "rights issues")

Through Rights offerings, companies seek to increase their capital by issuing new securities. Rights issues result in capital inflow and increase the number of shares as well as the overall market capitalisation of a security. Rights issues are therefore not market capitalisation neutral events.

Existing shareholders are given a chance to maintain their stake in the company to prevent dilution. The Right provides the opportunity to buy a proportional number of additional shares at a specific price (rights or subscription price, usually at a discount) within a fixed period (subscription period).

The rights are securities just like shares and usually will be listed on a stock exchange. Rights are tradable during a predetermined trading period. They can be exercised to subscribe to new securities during the exercise period. On the payment date of the event, the shareholder who exercised the rights will receive the resulting securities and will pay the company the exercise price per share. Unexercised rights lapse.

Rights can be transferable or non-transferable. Transferable rights, also known as renounceable rights, are issued to existing shareholders and can be traded in the open market. Non-transferable or non-renounceable rights cannot be bought or sold. The existing shareholders can buy the new issued stocks at a discount, so as to be compensated for the dilution caused due to rights offering. However, shareholders who do not exercise the rights by buying the discounted stock will likely see dilution in the value of their holdings.

For the purpose of index calculation, we assume full subscription of rights in our index calculations as long as the rights price is "in the money" when the rights trading period expires, otherwise we won't subscribe it. This event will therefore involve adjustments to both the price and the share counts of the impacted securities by the ex-date of the event.

The treatment of a Rights Issue is the following:

Adjusted Price = (Closing Price * A + Subscription Price * B)/(A + B)

New Number of Shares = Old Number of Shares * (A + B)/A

Where shareholders receive B(i) new shares for equity i (denoted B above) for every A(i) shares held (denoted A above)

Example: 2:25 rights offering (i.e., the right to buy two new shares for every twenty-five shares owned) at a subscription price \$2.50 and the market value of the stock on previous day's close is \$3.45; Total No. of old shares is 100.

Adjusted Price = (3.45 * 25 + 2.50 * 2)/(25+2) = \$3.38

New No. of Shares = 100 * (25+2)/25 = 108

3.9 Share repurchase/buy-backs

Buy-backs can take place as "open market acquisitions" or as "redemption activities".

Companies may retain securities as treasury stock, and this will not be associated with specific corporate action events. FR Indices will capture updates that result from open market acquisitions as part of the periodical rebalance review only.

Share Repurchase or Buyback actions also take place when the issuing company offers to buy its own shares directly from existing shareholders. This event results in a reduction in the overall number of

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outstanding shares. As a result, an adjustment factor is implemented in both the number of shares and constituent price to reflect the price offered in the buy-back. The index divisor will adjust accordingly as well.

3.10 Spin-offs/demerger

A Spin-off or demerger is the creation of an independent company through the sale or distribution of new shares of an existing business/division of a parent company. Shares of the new organisation (the spun-off entity) are distributed to the shareholders of the parent organisation at a ratio established by the parent (e.g., for each share in company A, the shareholder receives 3 shares of company B).

Stakeholders (e.g., Index providers) can process spin-offs in many ways from following the shareholder model to numerous methods of divesture of the spin-off equity. The impact of Spinoffs on FR Indices follows.

The price adjustment of the parent company is performed together with an index divisor adjustment. The spin off company is not added to the Index and is only reviewed in next rebalance. However, Index Committee does review spin offs and can choose to add the spin off before the scheduled rebalance. Such treatments are announced well ahead of time.

Adjustment Factor: An adjustment factor based on the formula below is to be calculated and with a Price adjustment type.

1. The adjustment factor is calculated as follows:

Adjusted Price = ((Closing Price * Shares Before Spin-off) – (Price of Spun Off Shares * New Shares))/Shares Before Spin-off.

Worked example.

ABCD proposes to demerge it's Electricals Business into a separately listed company which will be called EFGH Electricals Plc. ABCD shareholders will receive 1 EFGH ordinary share of GBp 25 for every 5 ABCD ordinary share of GBp 13.75 held. Cum price of ABCD company is GBp 274.25 and Open price of EFGH is GBp 192.5.

Adjustment Factor = $(274.25 - ((1/5) \times 192.5)))/274.25 = 0.859617$

2. In case a resulting Company is listed after Ex-date, the adjustment should be recalculated based on the actual opening price. It can also be calculated using market reaction adjustment (where new stock price not available):

Adjustment factor = Open Price/Cum Price

Please note that in case the capital is raised during the spin off, and an Offer price is available, it should be used instead of the Open price.

3.11 Mergers and acquisitions

A merger is a strategic transaction, which involves combining two or more companies, generally by offering the stockholders of one company securities in the acquiring company in exchange for the surrender of their stock. The great majority of these events are acquisitions and, typically, there is no name change or price adjustment made to the acquiring company. However, in some cases, two firms agree to go forward as a single new company rather than remain separately owned and operated. For example, both Thomson and Reuters ceased to exist when the two firms merged, and a new company, Refinitiv, was created.

Mergers may be pure cash deals or a stock exchange or a combination of both. A merger results in the deletion of the target company, normally with a name change and price adjustment made to the acquirer.

As far as M&As are concerned, three scenarios may happen:

i. The Target company is in the indices and the acquiring company is not.

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- ii. The Target company is not in the indices, but the acquiring company is.
- iii. The Target and acquiring companies are both in the indices.

In all scenarios, deletions will be made on the ex-date using the closing price of the stock on the date of deletion. New companies are only added to the indices subject to Index Actions Committee approval.

If the acquirer is issuing shares, adjustment will only be performed if the number of shares being issued is greater than or equal to 10% of the acquirer's current shares outstanding. If the amount is less than 10%, the share change will not be applied, and the new share counts will be adjusted at the next periodical rebalance.

If the acquirer is not in the index and only the target company is part of our universe (which means it is a publicly listed company), For FR and FTSE indices, we will remove it using a divisor adjustment. The effective date of the deletion will be the same as the one provided by the exchange for the delisting, and the price used will be the last update available.

If both the acquirer and target are part of a given index and new shares are being issued, then the acquirer share adjustment (if the change is above 10% of the overall shares outstanding) and the drop of the target will occur with the same effective date. Any price adjustments deemed required will be evaluated by the index committee on a case-by-case basis.

Shares Adjustment Factor = (New Shares + Old Shares)/Old Shares

M&A's impact on portfolios for late notice

Any late deletion⁴ of a security due to a Merger/Acquisition involving stock will be implemented as per the deal's terms to impacted Indices. If this exercise results in adding an ineligible stock to an Index which has specific stock selection criteria, then the added security will be dropped after providing two full days of notification of the action.

Any late deletion of a security resulting in a Cash payout will result in postponing the deletion of the security to allow for the two days notification.

Example of a late M&A in 3 possible scenarios:

Event:	An M&A event on company A where shareholders of A are receiving Shares of company B.							
Possible scenarios	Portfolio	A	В	Merger factor	Shares converted to B	Final shares of B	B shares treatment	Comment
Company A is part of portfolio but not B.	Х	1000		1.04	1040	1040	RIC B shares = A shares * merger factor	B is added into Portfolio
Only company B is part of portfolio	Y		1000		No Change	No Change	No Change	No Change
Both companies A & B both are part of portfolio	Z	1000	2000	1.04	1040	3040	(A Shares*merger factor) + B Existing Shares	B shares are grossed up

In the above example of Portfolio X, if deletion of A is not published in the Corporate Action File (ICA) at least two days before the Ex-Date, and Portfolio X has stock selection criteria that prohibits security B's

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⁴ An event is considered late if the event is not published into the index's ICA file (Forward Looking Capital Actions file) at least two days before the Ex-Date.

inclusion into the portfolio, then B will be added on Ex-Date and then dropped after two days. Longer term eligibility of B will not be checked until next rebalance of Portfolio X.

ICA illustration of above scenario: -

Actual Ex date of deletion of A: 11th Dec.

Delete event projected in ICA: 10th Dec.

ICA of 10th Dec will contain below three events: -

- 1. Addition of Security B with Ex date 11th Dec.
- 2. Deletion of Security B with Ex date 13th Dec.
- 3. Deletion of A with Ex date 11th Dec.

3.12 Bankruptcies

The removal of a bankrupt constituent is done at the same time and with the same closing price in all FR and FTSE Indices. If the stock is trading on its usual or primary exchange at the close of the day it is removed, that price is used. If the security is suspended from trading, the last available price will be used. There will be an index divisor adjustment required.

3.13 Suspensions and halts (from trading)

The FR Indices Operations team monitors halted securities on a continuous basis. Securities that remain suspended or halted for 40 or more days are reviewed for possible removal. In some exceptional situations, securities may be dropped earlier (e.g., Companies in the process of filing for bankruptcy).

3.14 Delistings

Index deletions in between rebalances normally result from delisting of securities by the exchange. There are multiple reasons for this type of event to occur, for example, Bankruptcies, companies going private, M&A activity, or failure to disclose information according to the rules set by the exchange.

FR and FTSE Indices will generally drop a stock from all our indices on the expected delisting day, according to the notification from the exchange. Where the delisting is due to an M&A event, the target company might be dropped once an offer to acquire the stock has been deemed unconditional. There will be an index divisor adjustment required.

3.15 Odd lot offer

An odd-lot buyback offer occurs when a company offers to purchase shares of its stock back from shareholders that hold small, odd positions (for example less than 100 shares). This event will not have an impact on the index divisor.

3.16 No par value

This is an event where the company decides to decrease the par value to zero. There won't be any impact on the index divisor, as both the price and the number of shares of the security will remain unchanged.

3.17 Capital reduction

Write-off of existing Equity Capital of a company by either reducing the par value and/or by cancelling a certain number of shares or capital.

If the event is only a capital reduction, without return of capital, the treatment will be similar to a consolidation (reverse split) using a market cap neutral event and adjusting both the price and the shares of the constituent in the same proportion.

Sometimes these events also include a cash payment, in the form of a return of capital. In this scenario, both the number of shares and the price will be adjusted but using different factors. The treatment is similar to a redemption buy-back.

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3.18 Write-off, Write-up, or Write-down of Capital

These events take place when the companies change the par value of the shares. We will not process any adjustments, as there won't be any impact to the price or number of shares. If a cash payment is involved, then it is described as Return of Capital.

3.19 Events involving other share types

Some events already covered in this document can include other share types. These types of events are not very frequent, but they do happen more often that investors might think. The key events that involve different share types are: Priority Issues, Rights Issues, Bonus Issues, and Stock Dividends.

The Share count of the parent security will never change. The price of the parent may be adjusted only if the full details of the event and/or the asset value of the "resulting" company are publicly available.

Adjusted Price = Cum price - (New Number Shares * New Price)/Old Number Shares

3.20 Exchange offer

An exchange offer takes place when a company exchanges its securities for a different series that was issued subsequently, or for securities of another company (as seen with split offs). This should not be confused with the conversion of preferred stocks or bonds to common stock. This event will impact the number of shares and the price of the constituent. It may be a voluntary event or a mandatory event. We will always adjust for mandatory events, when the terms of the deal are known. We will not adjust for voluntary events.

Exchange offer may involve RIC/Identifier changes, share changes, price changes. Each instance is reviewed separately and implemented on a case-by-case basis.

3.21 Capital repayments

Capital repayments are characterised by the distribution of a portion of a company's reserves or capital to its shareholders. They are similar to special dividends. The price of the security is adjusted on the ex-date of the event and the number of shares will not change. The index divisor will also be adjusted because of the price update.

Adjusted Price Factor = [P(t) + Cash]/P(t)

Where P(t) = Price on Ex-date.

3.22 Additions and deletions (rebalance)

The regular review window to perform additions and deletions of index constituents takes place twice a year, during the rebalance. New additions need to fulfil all the requirement criteria, in terms of length of history, liquidity, and minimum float. For further detail, please review the rebalance section of the FR Global Equity Indice Methodology available here.

3.23 Negative dividend

Negative dividends do get applied to securities in case companies deviate from its forecasted dividend amount or modify the dividend amount for past ex-date. If the modified dividend amount is less than what has already been credited for that security, we apply the negative dividend on the security to match the actual dividend amount for that particular security. This event gets captured in daily ICA (Index corporate action) file.

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Appendix I

Dividend handling for special case countries

In order to better understand the special handling, there are three critical dates to know: the Announcement Date, Ex-Dividend Date, and Payment Date.

Announcement Date – The date the dividend is formally announced by a company. On this date, the terms of the dividend (how much, when and who) are set out.

Ex-Dividend Date – (also commonly called Ex-Div) is the date that determines who is getting the dividend. Ex-Div date is two business days prior to the Record Date.

Record Date –The company records of holders of the stock on the record date, and uses this record to determine who receives the dividend.

Payment Date – This is the date the dividend payments are sent out by the company to the registered shareholders on the Record Date.

Stock transactions take a minimum of three business days to hit a company's record books. This means anyone purchasing shares on the Ex-Div date (two days prior to the Record Date) will not receive the dividend.

For almost all companies around the world, the timeline is Announcement Date, Ex-Div Date, Record Date, and finally the Payment Date. It also is not unusual for there to be multiple announcement dates leading up to the Record Date as dividend terms are solidified.

Japan, Russia, and South Korea are the only three countries whose corporations routinely don't follow this timeline. All three do follow the rule of paying the dividend to the holder of the shares on the Record Date. However, the terms of the dividend aren't always defined by the Record Date.

Japan

Japanese companies announce their Dividends as 'Forecasted', meaning until they are announced as 'Final' they are subject to change. The forecast announcement occurs before the Record Date but is not finalised until very close to the Payment Date, well after the Record Date. By definition, dividends are credited to a 'return' index on the Ex-Div date.

Our analysis tells us that over 80% of all Japanese Forecasted Dividends end up finalising to the exact terms which were forecasted. Analysis of the dividends that readjusted upon finalisation showed that they did so minutely, adjusting a very small percentage up or down.

FR and FTSE indices treat Japanese forecasted dividends as though they are final dividends, applying the forecasted amount on the Ex-Div date. Any adjustments to the dividend amount after the Ex-Div date are not posted. Although the final adjustments are not applied, they are not ignored. If the dividend adjustment is significant enough to warrant an update, it will be done on the announcement date of the 'Final' declaration and will not be restated historically back to the Ex-Div date. This is a very rare occurrence and should not be expected.

Korea

Over 90% of Korean companies announce their dividends with a historic Record Date, often many weeks after the Record Date. Therefore, the Korean company's dividend terms in the announcement includes a date well in the past for when the Ex-Div date of the dividend is set and a future date for Payment.

We treat all dividends uniformly, applying the dividend on the announcement date to the holder of shares on the Ex-Div date, if the Ex-Div date is in the past. These situations are very rare for most exchanges, but are the norm for the Korean exchanges.

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Total_Dividend_Paidad = [Dividend_Amount x Shares_Heldxd x Exchange_Ratead]

Where:

Total_Dividend_Paidad is the total sum of dividend applied to the index on the Announcement Date

Dividend Amount is amount per share in the currency of the dividend

Shares Held_{xd} is the number of shares held of the stock on the Ex-Dividend date

Exchange_Ratead is the exchange rate at the announcement date used to convert the local dividend into the Index currency

Whether the stock is part of the index on the announcement date or not is not relevant, but whether the stock was part of the index on the ex-dividend date and what the number of shares held on that date were.

Russia⁵

Over 90% of all Russian companies follow the traditional dividend timeline – announcement date, Ex-Div Date, Record Date, and finally the Payment date. However around 10% of Russian company dividends are announced after the Record Date (similar to most Korean companies).

Russian dividends are not handled any differently than any other country, but because they have a significant number following the Korean model, we make note of it here.

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⁵ At present, Russia is not part of any FR Equity Indices due to sanctions imposed on Russian securities.

Appendix II

Dividend tax handling for special case countries

FR total return indices assume all dividends are declared as gross, applying directly to the Total Return indices without adjustment. Net Total Return indices are calculated by taking a flat 20% deduction for taxes on the dividends. This is done for dividends of all countries, with the exception of Australia, New Zealand, Belgium, and the United Kingdom. All four countries have laws on tax withholdings regarding dividends, requiring the issuer of dividends to set aside some portion of the dividend in the name of the stockholder for tax purposes.

It is assumed that a fund manager will never go through the cost of trying to redeem tax credits from a government agency, especially foreign, but by the same token would never pay more taxes than required. Generally, any tax credits are passed onto the holder of shares in the index fund.

Australia

Australia incorporates a tax withholding system where the companies pay a percentage of the dividend to the government as tax and pass on the tax credit to the stockholder. This credit is known as a Franking Credit. Companies can pay the full tax obligation on the dividend (fully franked), some portion (partially franked), or none (unfranked).

All Australian dividends are recorded as gross dividends because it is not possible to apply tax credits for Price Only indices. The net dividend is determined by the amount of taxes already withheld. A fully franked dividend (all taxes paid) would result in both the gross and net dividend being the same. A partially franked dividend would result in a reduction in the net dividend by the amount of tax owed from the unfranked portion of the dividend.

Conduit Foreign Income is the portion of the dividend that was earned outside the domicile of the company. Some countries like Australia that require a company to withhold taxes on dividends do allow for allowances for income earned abroad. The deduction for foreign income is considered in the formulas when permitted by local tax laws.

The formula:

Unpaid Tax Rate = Dividend Tax Rate *

(100 - Franking Percent - (Conduit Foreign Income/Dividend Rate) *100)/10000

Adjusted Net Dividend = Dividend Rate * (1-Unpaid Tax Rate)

Adjusted Gross Dividend = Dividend Rate

Where:

Australian Dividend Tax Rate = 30%

Franking Percent = from 0 to 100 percent

Conduit Foreign Income = the portion of the dividend attributed to foreign income

Examples:

ABC Corp Example:

ABC Corp issues a dividend of 1.00 Australian Dollar which include a 50% Franking Credit. There is no portion of the dividend attributed to Conduit Foreign Income.

Unpaid Tax Rate = 30 * (100 - 50 - (0/1.00) *100)/10000 = 0.15

Adjusted Net Dividend = 1.00 * (1-0.15) = 0.85

Adjusted Gross Dividend = 1.00

XYZ Corp Example:

XYZ corp issues a dividend of 2.00 Australian Dollar which includes a 25% Franking Credit and 1.00 AUD attributed to Conduit Foreign Income.

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```
Unpaid Tax Rate = 30 * (100 - 25 - (1.00/2.00) *100)/10000 = 0.075
Adjusted Net Dividend = 2.00 * (1-0.075) = 1.85
Adjusted Gross Dividend = 2.00
```

New Zealand

New Zealand incorporates a tax withholding system where the companies pay a percentage of the dividend to the government as tax and pass on the tax credit to the stockholder. This credit is known as a Franking Credit.

New Zealand franking credits are based upon a 28% withholding tax, the resident dividend tax obligation. However, foreign entities are taxed at a higher 30% tax rate, requiring additional taxes beyond the franking rate. As an example, a fully franked (100%) company dividend withholds 28% of the dividend making the foreign holder of the instrument still responsible for an additional 2% in taxes. All dividend income are treated as foreign and thereby a 30% foreign tax rate is imposed by New Zealand.

The formula:

```
Unpaid Tax Rate = (NZ Foreign Divider
```

(NZ Foreign Dividend Tax Rate - (Dividend Tax Rate * Franking Percent/100))/100

Adjusted Net Dividend = Dividend Rate - (Dividend Rate * Unpaid Tax Rate)

Adjusted Gross Dividend = Dividend Rate

Where:

NZ Foreign Dividend Tax Rate = 30%

Dividend Tax Rate = 28%

Franking Percent = from 0 to 100 percent

Examples:

ABC Corp Example:

ABC corp issues a dividend of 1.00 New Zealand Dollar which include a 50% Franking Credit.

Unpaid Tax Rate = (30 - (28 * 50/100))/100 = 0.16

Adjusted Net Dividend = 1.00 * (1-0.16) = 0.84

Adjusted Gross Dividend = 1.00

XYZ Corp Example:

XYZ corp issues a dividend of 2.00 New Zealand Dollar which includes a 100% Franking Credit.

Unpaid Tax Rate = (30 - (28 * 100/100))/100 = 0.02

Adjusted Net Dividend = 2.00 * (1-0.02) = 1.96

Adjusted Gross Dividend = 2.00

United Kingdom

UK uses a tax imputation system to credit shareholders with tax credits for taxes already paid on dividends by the issuer of the stock (i.e., the company).

The normal tax rate for UK dividends is 10%, and the overwhelming majority of UK corporations impute their dividends, paying the 10% tax and providing shareholders the imputation credit. There are a few industry sectors that the UK has imposed a 20% dividend tax, these include Real Estate Investment Trusts and energy exploration. In general companies in these industries don't impute their dividends and instead pass-on the tax obligation to the shareholder.

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Dividend reporting details are recorded, including the imputation tax rate paid on a dividend, and the dividend tax rate assigned to a company by its industrial sector. Any company that has not specified its dividend tax rate is assumed to be the default tax rate (10%).

The formula:

```
If Dividend is imputed, then:
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Adjusted Net Tax Rate = 0

Else (Dividend is untaxed)

If Corporate Dividend Tax is unknown, then:

Adjusted Net Tax Rate = 10%

Else:

Adjusted Net Tax Rate = Company Identified Rate

Adjusted Net Dividend = Dividend Rate * (1 – Adjusted Net Tax Rate)

Adjusted Gross Dividend = Dividend Rate

Examples:

ABC Corp Example:

ABC corp issues a dividend of 1.00 UK Pound which is identified as imputed.

Adjusted Net Tax Rate = 0.0

Adjusted Net Dividend = 1.00 * (1 - 0.0) = 1.00

Adjusted Gross Dividend = 1.00

XYZ Corp Example:

XYZ corp issues a dividend of 2.00 UK Pound, which is identified not imputed and the company tax rate is 20%

Adjusted Net Tax Rate = 0.2

Adjusted Net Dividend = 2.00 * (1 - 0.2) = 1.60

Adjusted Gross Dividend = 2.00

Belgium

Belgium dividends are almost always issued in Net with the issuer of the dividend, withholding 25% for tax payment on the behalf of the holder of the stock. On rare instances some dividends are issued at the gross amount, leaving tax responsibility to the holder of the shares. We track which dividends have been already taxed and which have not. Those that have not are adjusted for Net Total Return calculations.

The formula:

If Dividend is reported as Net, then:

Adjusted Net Tax Rate = 0

Else (Dividend is reported as Gross)

Adjusted Net Tax Rate = 25%

Adjusted Net Dividend = Dividend Rate * (1 – Adjusted Net Tax Rate)

Adjusted Gross Dividend = Dividend Rate

Examples:

ABC Corp Example:

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ABC corp issues a dividend of 1.00 Euro Dollar which is identified as already taxed (Net).

Adjusted Net Tax Rate = 0.0

Adjusted Net Dividend = 1.00 * (1 - 0.0) = 1.00

Adjusted Gross Dividend = 1.00

XYZ Corp Example:

XYZ corp issues a dividend of 2.00 Euro Dollars which is identified untaxed (Gross)

Adjusted Net Tax Rate = 0.25

Adjusted Net Dividend = 2.00 * (1 - 0.25) = 1.50

Adjusted Gross Dividend = 2.00

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EMEA +44 (0) 20 7866 1810

North America +1 877 503 6437

Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 6441 1430

Sydney +61 (0)2 7228 5659

