Ground Rules



FTSE Digital Asset Bitcoin Ethereum Index

In Association with Digital Asset Research

ftserussell.com An LSEG Business



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Introduction

1.0 Introduction

- 1.1 This document sets out the Ground Rules for the FTSE Digital Asset Bitcoin Ethereum Index. The FTSE Digital Asset Bitcoin Ethereum Index measures the performance of Bitcoin and Ethereum by circulating weight. The Index is constructed to provide coverage of these two fixed digital assets and is a subset of the FTSE Global Digital Asset Index Series. The constituents are circulating supply weighted.
- 1.2 These rules should be read in conjunction with FTSE Global Digital Asset Index Series Ground Rules, Guide to the Vetting of Digital Assets and Digital Asset Exchanges and the Guide to the Calculation of the FTSE DAR Digital Asset Prices. Copies of these documents are available at www.ftserussell.com.
- 1.2.1 A digital asset is a Cryptographically Secured Digital Instrument for which the issuance, transfer and ownership is recorded on a data structure commonly referred to as a Blockchain.
- 1.2.2 The FTSE Digital Asset Bitcoin Ethereum Index is designed to provide market participants a mechanism to evaluate digital asset investments and prices.
- 1.3 The FTSE Digital Asset Bitcoin Ethereum Index does not take account of ESG factors in its index design.
- 1.4 The base currency of the FTSE Digital Asset Bitcoin Ethereum Index is US Dollars (USD).
- 1.5 Indices are calculated at Price Return levels only.

1.6 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, The Yield Book Inc and Beyond Ratings.
- 1.7 FTSE Russell does not make any representation or warranty, express or implied, as to the accuracy, completeness or correctness of the FTSE Digital Asset Bitcoin Ethereum Index.
- 1.8 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, and/or
 - any 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 inaccuracies in the compilation of the index series or any constituent data.



Management Responsibilities

2.0 Management Responsibilities

- 2.1 FTSE International Limited (FTSE)¹
- 2.1.1 FTSE is the Benchmark Administrator of the Index Series.
- 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;
 - make changes to the constituents and their weightings in accordance with the Ground Rules;
 - carry out 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 reviews;
 - · disseminate the indices.

2.2 Digital Asset Research

- 2.2.1 Digital Asset Research (DAR) assesses the quality of pricing data, qualifies pricing sources, calculates the FTSE DAR Digital Asset Prices and supplies FTSE Russell with price feeds and advises on the eligibility of assets in the FTSE Digital Asset Bitcoin Ethereum Index.
- 2.2.2 DAR is an independent, privately-owned research firm and data provider which partners with FTSE Russell in research into and providing data on digital assets.
- 2.2.3 DAR is responsible for the ongoing vetting of digital assets and of the Broker Dealer/Exchanges of digital assets. DAR collects and validates the data it obtains as Principal to identify ensuring both digital assets and Broker Dealer/Exchanges of digital assets pass a strict set of rules.

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).

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. The feedback from these consultations will be considered by the FTSE Russell Index Governance Board before approval is granted.



FTSE Russell Index Policies

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 Guide to the Vetting of Digital Assets and Digital Asset Exchanges
- 3.1.1 This document sets out the criteria for the vetting of digital assets and digital asset Exchanges used in the calculation of the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices
 Guide to the Vetting of Digital Assets and Digital Asset Exchanges.pdf
- 3.2 Guide to the Calculation of the FTSE DAR Digital Asset Prices and FTSE DAR Reference Prices
- 3.2.1 This document sets out the methodology for the calculation of the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices.
 - Guide_to_the_Calculation_of_FTSE_DAR_Digital_Asset_Prices_and_Reference_Prices_Fixes.pdf
- 3.3 Guide to Calculation Method for the Median Liquidity Test
- 3.3.1 This guide describes how the liquidity test is conducted in order to assist users in their ability to replicate the liquidity test.
 - FTSE_Global_Digital_Asset_Index_Series_Guide_to_Calculation_Method_for_the_Liquidity_Test.pdf
- 3.4 Network Events Guide for FTSE Digital Assets Indices
- 3.4.1 This document sets out guidance for the treatment of network events and assumes the reader is already familiar with the basic concept of index calculation and treatment of digital price adjustments caused by such developments
 - Digital_Actions_and_Network_Events_Guide.pdf
- 3.5 Participating and Watchlist exchanges
 - Digital_Asset_Participating_Watchlist_Exchange_List.pdf
- 3.6 Queries and Complaints
 - FTSE Russell's complaints procedure can be accessed using the following link:
 - Benchmark_Determination_Complaints_Handling_Policy.pdf
 - FTSE Russell's Appeal Process can be accessed using the following link:

Appeals_Against_Decisions.pdf

- 3.7 Recalculation Policy and Guidelines
- 3.7.1 This policy and the FTSE Russell Digital Assets Index Recalculation Guidelines below apply only to those digital assets indices where the relevant index ground rules and other methodology documents indicate that this policy and the guidelines apply.
 - Digital_Asset_Index_Recalculation_Policy_and_Guidelines.pdf
- 3.8 Policy for Benchmark Methodology Changes

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

Policy_for_Benchmark_Methodology_Changes.pdf



Digital Asset Eligibility

4.0 Digital Asset Eligibility

- 4.1 Eligibility Requirements
- 4.1.1 The index comprises of two fixed digital assets Bitcoin and Ethereum.



Periodic Review of Constituents

5.0 Periodic Review of Constituents

- 5.1 Eligible Digital Assets
- 5.1.1 Only Bitcoin and Ethereum digital assets are eligible for the FTSE Digital Asset Bitcoin Ethereum Index.https://research.ftserussell.com/products/downloads/Guide_to_the_Vetting_of_Digital_Assets_a nd_Digital_Asset_Exchanges.pdf
- 5.2 FTSE DAR Reference Price
- 5.2.1 The price of each digital asset in a FTSE Digital Asset Bitcoin Ethereum Index is the FTSE DAR Reference Price Benchmark Asset Fixes.
 - Details of the FTSE DAR Reference Prices are provided in the document <u>Guide to the Calculation of</u> the FTSE DAR Digital Asset Prices and FTSE DAR Reference Prices.
- 5.3 Index Reviews
- 5.3.1 The FTSE Digital Asset Bitcoin Ethereum Index is reviewed on a quarterly basis in March, June, September and December (the review month) using circulating supply as at the close of the last day of the month prior to the review month (the data cut-off date) and price as at the close of Wednesday after the first Friday of the review month. The review will be implemented on the third Friday, after close of the review month. Prior to March 2022, the indices were reviewed on a quarterly basis in January, April, July and October (the review month) using market information as at the close of the last day of the month prior to the review month (the data cut-off date). The reviews were implemented at 22:00 UTC on the Sunday following the second Friday in the month following the month of the data cut-off date.



Digital Asset Actions and Network Events

- 6.0 Digital Asset Actions and Network Events
- 6.1.1 Full details of changes to constituent digital assets at the Quarterly Review due to events can be accessed in the Digital Actions and Network Events Guide using the following link:

Digital Actions and Network Events Guide



Index Calculation Method

7.0 Index Calculation Method

- 7.1 Prices
- 7.1.1 FTSE calculates the FTSE DAR Reference Price for each digital asset using the method outlined in the document Guide to the Calculation of FTSE DAR Digital Asset Prices and FTSE DAR Reference Prices.
- 7.2 Calculation Frequency
- 7.2.1 The FTSE DAR Reference Price is calculated every hour and the 22:00 UTC fix is used for the calculation of the FTSE Digital Asset Bitcoin Ethereum Index and associated products.
- 7.3 Index Calculation
- 7.3.1 The FTSE Digital Asset Bitcoin Ethereum Index calculation formula is described below:

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

where,

- *i* = 1,2,...,N digital assets
- *N* is the number of digital assets in the index.
- t is the calculation time
- $p_i(t)$ is the FTSE DAR Reference Price of the digital asset i at calculation time t
- $e_i(t)$ is the exchange rate required to convert the digital asset i price into the index's base currency at calculation time t
- $s_i(t)$ is the circulations supply used by FTSE Russell for the digital asset, as defined in these Ground Rules at calculation time t.
- $f_i(t)$ is the investibility weighting factor to be applied to a digital asset i at calculation time t, to allow amendments to its weighting, expressed as a number between 0 and 1, where 1 represents a 100% free float. Free float is computed as $f_i(t) = \frac{(s_i(t) staked\ digital\ assets_i(t))}{s_i(t)}$

• d is the divisor, a figure that represents the total capital of the index at the base date base hour. The divisor can be adjusted to allow changes to digital assets to be made without distorting the index in the FTSE Digital Asset Index Series.

7.4 Index Opening and Closing Hours

7.4.1 The FTSE Digital Asset Bitcoin Ethereum Index is calculated Sunday to Friday at 22:00 UTC.



Appendix A: Further Information

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

Glossary - Digital Assets.pdf (ftserussell.com)

Further information on the FTSE Digital Asset Bitcoin Ethereum Index is available from FTSE Russell.

For contact details please visit the FTSE Russell website or contact FTSE Russell client services at info@ftserussell.com.

Website: www.ftserussell.com

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