



Guide to the Vetting of Digital Assets and Digital Asset Exchanges

in association with Digital Asset Research
v1.0

Methodology



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Section 1

Introduction

1.0 Introduction

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. Copies of the Guide to the Calculation of the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices are available from www.ftserussell.com.

1.1.1 A digital asset is a cryptographically secured digital Instrument for which issuance, transfer and ownership is recorded on a data structure commonly referred to as a blockchain.

1.2 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, The Yield Book Inc and Beyond Ratings.



Section 2

Management Responsibilities

2.0 Management Responsibilities

2.1 FTSE International Limited (FTSE)¹

2.1.1 FTSE is responsible for the calculation, production and operation of the FTSE DAR Reference Prices and is the administrator of the FTSE DAR Reference Prices – Benchmark assets. The calculation of the FTSE DAR Reference Prices is set out in the Guide to the Calculation of the FTSE DAR Digital Asset Prices and FTSE DAR Reference Prices available at www.ftserussell.com.

2.1.2 The inputs to the calculation of the FTSE DAR Digital Asset Prices and FTSE DAR Reference Prices are drawn from eligible digital asset exchanges based on the criteria set out in this document.

2.2 Digital Asset Research

2.2.1 Digital Asset Research (DAR) is the calculation agent for the FTSE DAR Digital Asset Prices. DAR assesses the quality of market pricing data, qualifies pricing sources and supplies FTSE Russell with price feeds.

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 ensure both digital assets and Broker-Dealer/exchanges of digital assets pass a strict set of rules.

2.3 Amendments to this Document

2.3.1 This document shall be subject to regular review by FTSE Russell to ensure that it continues to best reflect the aims of the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices.

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).



Section 3

Exchange Vetting and Eligibility

3.0 Exchange Eligibility Criteria and Digital Asset Pricing Sources

3.1 Exchange Eligibility Criteria

3.1.1 In the absence of specific regulations or laws to specifically identify digital assets, FTSE Russell will employ the following rules to reflect what FTSE Russell considers to be common practice in this emerging area of investment. For the purposes of this document digital asset exchanges and Broker-Dealers are referred to as 'Exchanges' (or 'Exchange'), even though many are not regulated.

3.1.2 Exchanges are eligible as a digital asset pricing source for the FTSE DAR Reference Price files if they qualify as either watchlist or vetted, as defined below.

3.1.3 Watchlist Exchanges have met all the following criteria:

- a) The domicile of the Exchange does not restrict capital trading to foreign or international investors;
- b) Exchanges must be managed by companies with easily available and verified biographical information on its leadership team;
- c) An Exchange must maintain a minimum daily reported volume of \$5,000,000USD each day over the six-month period leading up to each quarterly review (see 3.2.1);
- d) Trading data is available and allows for continuous delivery of trade prices and trading volume data, including data fields which detail the asset pair, price, volume and accurate timestamp for each trade. (FTSE Russell relies upon DAR to source this data);
- e) Preliminary data science assessment to ensure the Exchange is accurately reporting trading activity by real users.

3.1.4 Vetted Exchanges have met all the watchlist criteria, as well as the following additional criteria:

- a) Regulatory Assessment
 - i. Obtained the relevant licensing and registrations for the jurisdiction(s) in which the Exchange maintains an office, is headquartered, or is otherwise registered to do business;
 - ii. Operates within the laws of its domiciled country and does not knowingly violate any local or international regulations applicable to it based on its location, or the location of its permitted users.

b) Governance and Institutional Assessment

- i. “Know Your Customer” (KYC) and Anti-Money Laundering (AML) controls require, at a minimum, that a user verify their name, phone number and bank account prior to using the platform;
- ii. Provide open support communication channels to its users;
- iii. No founded accusations of fraud or criminal charges against the Exchange or leadership team;
- iv. An Exchange must have a publicly listed fee schedule which is uniformly practiced and demonstrates that the Exchange operates as a centralized, for-profit business.

c) Technical Assessment

- i. Have no significant downtime, defined as more than 48 cumulative hours in any one-month period;
- ii. No meaningful security lapse or breach in the last 12 months which resulted in the loss of client or Exchange funds exceeding 1% of its total holdings;
- iii. Have no known deficiencies in operational security.

d) Comprehensive data science assessment

Further data science tests to ensure the Exchange is accurately reporting trading activity by real users and not reporting or engaging in, or allowing users to engage in, non-economic trading. This is reviewed by DAR through a series of data science tests that confirm economic trading, by looking at the following:

- i. Price follows natural patterns that track with the market;
- ii. Volume follows natural patterns that track with the market;
- iii. Trading occurs at natural and expected lot levels;
- iv. Price does not widely diverge from the wider market.

3.1.5 Auxiliary information

- a. Other criteria are also reviewed, but not required, for each digital asset Exchange when information is ascertainable. The following criteria are believed to reflect best practices among Exchanges:
 - i. Have incorporated and appropriately use trade surveillance measures;
 - ii. Use an institutional quality crypto custodian or capability;
 - iii. Have undergone a successful proof-of-reserve audit;
 - iv. Robust security practices including a dedicated member of leadership team, detailed security policy which includes safeguards and redundancies, and successful security audit;
 - v. Robust business continuity plan;
 - vi. Confirmed use of SegWit;
 - vii. Sound banking relationship;
 - viii. Adequate insurance;
 - ix. Uniformly applied withdrawal protocols;

- x. Uniformly applied crypto event policies;
- xi. Participation in information or surveillance sharing agreements;
- xii. Sufficient capitalization.

3.2 **Digital Asset Pricing Sources**

3.2.1 Loss of Eligibility at Quarterly Review

DAR will review the list of eligible digital asset Exchanges on a quarterly basis. In circumstances where an eligible Exchange fails relevant inclusion criteria during a quarterly review, the Exchange will be demoted to the watchlist (if a vetted Exchange) or disqualified according to the criteria failed. Eligibility of the Exchange will be assessed at the next quarterly review.

3.2.2 Immediate Loss of Eligibility

In circumstances where pricing fidelity is in doubt (e.g. Rule 3.1.4 d), there is a significant security breach, or some other deleterious event that questions the validity of an Exchange, then the Exchange may lose eligibility.

The offending Exchange will be removed as a digital asset pricing source used in the calculation of the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices with immediate effect.



Section 4

Digital Asset Vetting and Eligibility

4.0 Digital Asset Eligibility

4.1 FTSE DAR Digital Asset Prices

4.1.1 In order for a FTSE DAR Digital Asset Price to be calculated, a digital asset must meet the following eligibility requirements:

- a) A digital asset utilizing standardized cryptographic tools to guarantee legitimacy and security, for which the issuance, transfer and ownership is recorded on a blockchain data structure;
- b) Has the ability for robust custody, such that assets can be custodied either by:
 - (i) an approved institutional quality digital asset custodian,
 - (ii) an institutional quality Hardware Security Modules (HSMs), and/or
 - (iii) software wallets which allow for air-gapped cold storage, offline wallet generation, and offline transaction signing;
- c) No prevailing security deficiencies in neither the underlying network that supports the digital asset, nor in the set of cryptographic tools used in its protocol;
- d) Digital assets must not be subject to extraordinary surveillance or legal action by any regulatory body. A digital asset which is a member of the eligible universe and becomes subject to surveillance or legal action by any regulatory body may have its eligibility revoked at the next rebalance;
- e) The digital asset price is determined by market (trading) activity;
- f) Digital assets must trade on a minimum of three vetted Exchanges for the initial calculation of a FTSE DAR Digital Asset Price. This may reduce to two vetted Exchanges for assets for which a FTSE DAR Digital Asset Price is already calculated without adversely affecting eligibility. Details of Exchange vetting are provided in Section 3;
- g) Digital assets must trade no more than 80% of their combined one-month trailing trading volume on any single vetted Exchange, thus demonstrating sufficient support for institutional trading;
- h) Over the previous two quarters:
 - 1. The proportion of trades for a digital asset on vetted Exchanges must be greater than 10% of the number of trades made on both vetted and watchlist Exchanges for the said digital asset;
 - 2. The proportion of traded volume for a digital asset on vetted Exchanges must be greater than 10% of all traded volume on both vetted and watchlist Exchanges for the said asset;
 - 3. Average price correlation between all Exchanges of 0.5 or greater.

- i) Digital assets must trade an average one-month trailing trading volume greater or equal to the 5th percentile of the cumulative average one-month trading volume of available digital assets after application of Rules 4.1.1a to 4.1.1h;
- j) Digital assets must be directly quoted in a fiat currency (e.g. USD, GBP, etc) or in BTC, ETH or USDT.

4.2 FTSE DAR Reference Prices

4.2.1 In addition to those assets for which a FTSE DAR Digital Asset Price is calculated, digital assets which trade solely on watchlist Exchanges, or which trade on a combination of watchlist Exchanges and vetted Exchanges, may also have a FTSE DAR Reference Price calculated provided, either:

- a) To commence calculation of a FTSE DAR Reference Price, a digital asset must trade on a minimum of three Exchanges which can be watchlist Exchanges or a combination of watchlist Exchanges and vetted Exchanges;
- or:
- b) If a FTSE DAR Reference Price is already calculated, the asset must trade on a minimum of two Exchanges which can be watchlist Exchanges or vetted Exchanges or a combination of watchlist Exchanges and vetted Exchanges in order to continue to be included on the list.

4.3 FTSE DAR Reference Prices – Non-Benchmark Assets

4.3.1 If the calculation of a FTSE DAR Reference Price for a digital asset includes prices sourced from one or more watchlist Exchanges, the digital asset is deemed a Non-Benchmark Asset. The FTSE DAR Reference Prices – Non-Benchmark Assets are calculated for information, research and analysis purposes only. The FTSE DAR Reference Prices – Non-Benchmark Assets are not, and are not intended to be, used in the European Union (as “use” is set out in article 3(1)(7) of the EU Benchmark Regulation and 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 in the European Union) (the “EU BMR”) and accordingly, the EU BMR does not apply to the FTSE DAR Reference Prices – Non-Benchmark Assets. Consequently, supervised entities (as “supervised entities” is set out in article 3(1)(17) of the EU BMR) within the European Union are not permitted to use the FTSE DAR Reference Prices – Non-Benchmark Assets as benchmarks as set out in article 3(1)(7) of the EU BMR.

4.4 FTSE DAR Reference Price – Benchmark Assets

4.4.1 If the calculation of a FTSE DAR Reference Prices for a digital asset sources prices entirely from vetted Exchanges, the digital asset is deemed a Benchmark Asset. The FTSE DAR Reference Prices - Benchmark Assets can be used in the European Union (as “use” is set out in article 3(1)(7) of the EU Benchmark Regulation and 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 in the European Union) (the “EU BMR”).

4.5 Loss of Eligibility

4.5.1 Normal Loss of Eligibility

- a) A FTSE DAR Reference Price will cease to be calculated if the digital asset is found to be in violation, without rectification, of any of the listed eligibility requirements in Rule 4.1 or Rule 4.2.

4.5.2 Immediate Loss of Eligibility

- a) Under extraordinary circumstances, including security breaches (e.g. Rule 4.1.1 a, Rule 4.1.1 c), regulatory action (e.g. Rule 4.1.1 d), or identified fraud (e.g. Rule 4.1.1 e), which severely impairs the value of an eligible digital asset, an asset may lose eligibility.
- b) Two days’ notice will be provided before the termination of the calculation of the FTSE DAR Reference Price.

4.6 Quarterly Review of Digital Asset Eligibility

4.6.1 The eligibility of the digital assets is reviewed on a quarterly basis by DAR.



Appendix A: Further Information

Further information on the FTSE DAR Digital Asset Prices and the FTSE DAR Reference Prices 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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