



1 George Street  
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## Scientific Infra's Infra Debt100 Index Family

### Benchmark Statement

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Last Review Date: 22 September 2022

#### General disclosures

Scientific Infra Pte Ltd is the entity administering and determining Scientific Infra's benchmarks.

Scientific Infra Pte Ltd is registered by European Securities and Markets Authority – ESMA as a non-significant third country benchmark administrator under Regulation (EU) 2016/1011 of the European Parliament and of the Council. Scientific Infra Pte Ltd is registered under the legal entity identifier: 984500EB96F3CB9F9574 in the ESMA Benchmark Administrators register.

This statement applies to the Scientific Infra Pte Ltd's Infra Debt100 Index family.

All benchmarks within the Infra Debt100 Index family is a non-significant benchmark according to EU Regulation 2016/1011 given that:

- (a) no benchmark is used directly or indirectly within a combination of benchmarks as a reference for financial instruments or financial contracts or for measuring the performance of investment funds having a total average value of at least EUR 50 billion on the basis of all the range of maturities or tenors of the benchmark, where applicable, over a period of six months; and
- (b) each benchmark has market-led substitutes and, in the event that the benchmark ceases to be provided or is provided on the basis of input data non longer fully representative of the underlying market or economic reality or unreliable input data, the benchmark administrator does not anticipate a significant and adverse impact on market integrity, financial stability, consumers, the real economy or the financing households or businesses in the European Union



## Key Terms Definition

**Benchmark** has the meaning set in EU regulation 2016/1011, “any index by reference to which the amount payable under a financial instrument or a financial contract, or the value of a financial instrument, is determined, or an index that is used to measure the performance of an investment fund with the purpose of tracking the return of such index or of defining the asset allocation of a portfolio or of computing the performance fees”

**Benchmark family** has the meaning set in EU regulation 2016/1011 “a group of benchmarks provided by the same administrator and determined from input data of the same nature which provides specific measures of the same or similar market or economic reality”

**Input data** has the meaning set in EU Regulation 2016/1011 “data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by an administrator to determine a benchmark”

**Unlisted Infrastructure Universe Standard** is to define the investable universe of unlisted infrastructure used to create the indices and to identify the relevant universe to track the fair value and the risk-adjusted performance of the unlisted infrastructure asset class.

**Global Infrastructure Investment Data Standard** is part of the suite of documents describing the foundations of Scientific Infra’s indices. It is Scientific Infra’s effort to standardise performance reporting for the infrastructure asset class and addresses the data gaps identified as important breaks on future private infrastructure investment.

**TICCS®** known as The Infrastructure Company Classification Standard is part of the suite of documents. This is a class-based taxonomy designed to classify and organize data about equity and debt investments in infrastructure companies.

**Infrastructure Indices Methodology Standard** describes the approach used to design and compute indices of private infrastructure debt investments. It describes the main procedures, methods, and rules governing the definition and computation of these indices.

**Unlisted Infrastructure Asset-Pricing Methodology** describes the approach taken to estimate the value, performance, and risk of each individual index constituent. Our approach follows standard guidelines on “fair value” accounting as defined under IFRS 13 and ASC topic 820 (US GAAP) and IFRS 9.

**Unlisted Infrastructure Asset-Pricing Methodology** describes the approach to calibrate the implied volatility of cash flow available for debt service to ensure the credit risk of the evaluated infrastructure company.



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## Description of the Scientific Infra's Infra Debt100 Index family

Scientific Infra Pte Ltd provides access to Unlisted and Private Infrastructure Indexes with the aim to provide a transparent view of the unlisted private infrastructure market, matching best practices in mainstream investment measurement with performance assessment across asset classes.

The Scientific Infra Debt100 Index family is a debt index on unlisted and private infrastructure investments.

Infra Debt100 Index family is market-value weighted where each constituents influences the index in proportion to its value. This family of index measures the performance of,

- unlisted debt investments in corporates, project companies in global infrastructure market.
- unlisted debt investments in project companies only, in the global infrastructure market.
- unlisted debt investments in corporates and project companies in advanced economies

Methodological robustness is paramount to the Scientific Infra Pte Ltd.'s approach in designing and computing its indexes, therefore its indexes are not contributed but calculated indices. Calculated indices avoid sample biasness found in primary market spread data and deliver better risk and performance measurement. Index quality, reliability and integrity requires that indexes are managed and calculated according to a consistent asset pricing methodology, transparent rules, procedures and systematic as much as possible.



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## Input Data

Scientific Infra's objective of the unlisted infrastructure Universe Standard is to identify the relevant universe to track the fair value and the risk-adjusted performance of the unlisted infrastructure asset class that will be used to calculate the indexes.

As such a clear guideline on the types of input data to be used, the level of priority and use of different types of input data are defined and detailed in the **"Global Universe Standard for Infrastructure Investment Benchmarking"**.

Fair value is a market-based measurement rather than an entity-based measurement. It is concerned with how average prices are formed in the most representative markets. In the terminology of IFRS 13, the relevant market is known the principal (or most advantageous) market, enables the best possible measurement of average/systematic drivers of prices in unlisted infrastructure investments. The investment universe is defined by,

- national-market, relevant national markets are determined on the basis of national-level index inclusion criteria, including their level of activity (number and frequency of transactions and market participants) and relative size, and also minimum data availability.
- individual company, within the markets that qualify under these criteria, potential index constituents - whether they are equity or debt issuers - must also meet a set of minimum inclusion criteria. These include investability, age and minimum data availability.

Once the investment universe is defined, is to build a sampled universe that meets certain minimum representative criteria. The sampled universe is then used as the basis for defining the constituents of the global broad market index. Broad market index constituents are further filtered according to minimum-size and time-to-maturity filters.

These categories of information, guidelines and rules are publicly available at <https://edhec.infrastructure.institute/>

## Regulatory Disclosures

In respect of EU Regulation 2019/2089 amending EU Regulation 2016/1011 and its Delegated Act 2020/1816, below are the required sustainability disclosures within the benchmark statement, related to the Infra300 Unlisted Equity Index and Infra100 Equity Index family:

Item	Disclosure Item	Declaration
1	Name of the benchmark administrator.	Scientific Infra Pte. Ltd.
2	Type of benchmark or family of benchmarks	Debt
3	Name of the benchmark or family of benchmarks.	Infra Debt100 Index family
4	Are there in the portfolio of the benchmark administrator any EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks, benchmarks that pursue ESG objectives or benchmarks that take into account ESG factors?	No
5	Does the benchmark or family of benchmarks pursue ESG objectives?	No
6 to 10		Not applicable
	Date on which information has been last updated and reason for the update.	-

All Benchmarks administrated by the company (including benchmarks within the Scientific Infra Pte Ltd) are non-significant benchmarks in the sense of the EU regulation 2016/1011 given that:

- (a) no benchmark is used directly or indirectly within a combination of benchmarks as a reference for financial instruments or financial contracts or for measuring the performance of investment funds having a total average value of at least EUR 50 billion on the basis of all the range of maturities or tenors of the benchmark, where applicable, over a period of six months; and
- (b) each benchmark has market-led substitutes and, in the event that the benchmark ceases to be provided or is provide on the basis of input data no longer fully representative of the underlying market or economic reality or unreliable input data, the benchmark administrator does not anticipate a significant and adverse impact on market integrity, financial stability, consumers, the real economy or the financing of households or business in the EU.

In respect of EU Regulation 2019/2089

- (c) Scientific Infra's Infra Debt100 Index family do not contain any EU Climate Transition Benchmark or EU Paris Aligned Benchmark.

Pursuant to EU Regulation 2016/1011 Article 27 (1) (c & d), benchmark users are informed that,

- (a) External factors beyond the control of Scientific Infra Pte Ltd may incur changes or the cessation of the benchmark. Scientific Infra Pte Ltd periodically reviews its benchmarks to question their continued relevance and quality in changing market conditions and may update benchmark definitions and methodologies if required to achieve these goals. However, there may be circumstances, such as changes to the underlying interest or market infrastructure, where a benchmark methodology cannot be reasonably adapted and termination may be warranted.



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Other conditions, including index offering strategy, may also prompt Scientific Infra Pte Ltd to terminate, or put forward a proposal to terminate, a benchmark.

- (b) Against this backdrop, benchmark subscribers and other stakeholders who have contracts or financial instruments that reference a benchmark or investment funds that use a benchmark to measure their performance, are advised to have robust processes in place, including fallback provisions, to address the possibility of material changes to the methodology of this benchmark as well as the possibility of an outright cessation of this benchmark.



## Applicable Methodologies and Policies

The methodology for the family of indexes shares the same key element with the objective of providing a transparent view of the unlisted infrastructure market, matching best practices in mainstream investment measurement with performance assessment across asset classes. These indexes are calculated indexes, not contributed, which can avoid sample biases and deliver better risk and performance measurement. Methodological robustness is paramount to this approach.

The Company's index methodology and Universe Data Standard are documented in these suite of core documents:

- **The Global Universe Standard for Infrastructure Investment Benchmarking**

This document describes how Scientific Infra defines the investable universe of unlisted infrastructure used to create the indices.

- **The Infrastructure Company Classification Standard or TICCS®**

This document describes the definition of the investable universe of unlisted infrastructure used to create the Indexes.

- **The Data Collection Standard**

This document contains a global data standard to assist in the collection and standardization of reporting with respect to infrastructure investments. This allows the performance of unlisted infrastructure investments with other asset classes to be compared more transparently. The increased transparency created by this data standard supports the development of the infrastructure asset class. Infrastructure companies are classified according to their business risk, Industrial activity, Geoeconomics and Corporate governance. These are fundamental characteristics provides clarity on factors that drive risks and returns in unlisted infrastructure companies and as well as a global classification of investable infrastructure. The Data will contain cash flow, event, and other data required to compute the performance and risk of investments in the equity or debt of unlisted infrastructure companies and build indices documenting the characteristics of the unlisted infrastructure asset class.

- **The Infrastructure Indices Methodology Standards on Unlisted Equity and Private Infrastructure Debt**

This document describes the approach used to design and compute indices of unlisted equity infrastructure and private infrastructure debt investments. It describes the main procedures, methods, and rules governing the Indexes definition and computation. Aim is to provide a transparent view of the unlisted infrastructure market, matching best practices in mainstream investment measurement with performance assessment across asset classes.

- **The Unlisted Infrastructure Asset-Pricing Methodology**

This document describes the approach taken to estimate the value, performance, and risk of each individual index constituent. The approach follows standard guidelines on "fair value" accounting as defined under IFRS 13 and ASC topic 820 (US GAAP) and IFRS 9.

- **The Credit Risk Methodology**

This document calibrates the implied volatility of the cash flow available for debt service (CFADS) to measure the credit risk of the evaluated infrastructure company. A number of credit analytics



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including default risk (PD), loss given default (LGD) and more can be computed on the basis of the implied volatility of CFADS.

Index methodologies are complemented by index policies which the Company has in place that describes the principles that would guide the Company should exceptional circumstances affect the index management and explain how methodology changes and index termination are managed.

- **Index Recalculation Policy**

This document address inaccuracies that may arise in the index and constituent data from time to time and investors, index constituents, licensees or other market participants should be aware of this

- **Index Methodology Change and Consultation Policy**

This document explains how proposed methodology changes are originated, investigated, and validated.

- **Index Termination Policy**

This document outlines the procedure which is followed when the Company considers terminating index and setting out the considerations that the Company will undertake in deciding cessation of an index or a family of indexes.

- **Trading Halt and Market Disruption Policy**

This document providing guidance for the treatment of index changes in the event of trading halts, market closures, disruptions or any other major or critical events which may result in the index/indexes not being calculated or an alternate data being sourced, ultimately ensuring that the integrity of the index/indexes is maintained.

These rules and policies are available on the website, <https://edhec.infrastructure.institute/>

The company provides full access to its index methodologies on a complimentary and non-discriminatory basis.



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## Amendments to the Index Methodology

The Scientific Infra **Methodology Change and Consultation Policy** explains how proposed methodology changes are originated, investigated and validated and when/how licensees and, where relevant, other stakeholders would be consulted in relation to these.

The Research and Index Offering Committee is the decision-making authority in matters of new offerings and changes to existing methodologies.

Relying on its expertise and considering internal and external feedback, it commissions research with potential impact on methodologies, analyses its significance with respect to the offering of benchmarks and analytics and, where relevant, makes formal proposals for the decommissioning of existing indices, changes to existing methodologies, and new index offerings.

Formal significant proposals for changes to existing methodologies (as well as new index methodologies) are subject to the review of the Index Oversight Committee.

When the decision to implement a change is finalized, it is announced to the relevant stakeholders. Subscribers of the affected benchmark are directly notified of the amendment by email and a Notice/Announcement is published on the website. These announcements describe the change and its rationale, implementation details and timeline.

Changes are disclosed ahead of their implementation, at least two weeks prior to the relevant Quarterly Review Date or earlier except when an emergency requires the announcement to be concurrent with the implementation. Once the change is effective, the Methodology documents are amended. A record of all changes is maintained for a minimum of five years.



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## Benchmark Cessation

The cessation of a benchmark may be justified by one or several reasons, notably including:

- Changes in the structure of the underlying market;
- Changes in the market infrastructure;
- Political events affecting the market accessibility or regulatory changes affecting the underlying interest;
- Unreliable or insufficient data input;
- Insufficient revenues;
- Obsolescence of methodology;
- Redundancy;
- Regular Reviews leading to removal of indexes due to similar methodologies to another index.

Proposals to terminate a benchmark need to be approved by the Research and Index Offering Committee and must be notified to the Index Oversight Committee.

Where appropriate, relevant stakeholders may be consulted on the impact of the proposed or required termination, the proposed time schedule and alternatives.

The Scientific Infra **Index Termination Policy** lists the conditions that may warrant decommissioning an Index, discusses decision-making on such issues and describes the termination procedure.