

Scientific Infra & Private Assets

SIPA PRODUCT CERTIFICATION · REQUIRED READING

infraMetrics Equity — Product Factsheet

Unlisted Infrastructure Equity: Coverage, Indices, Data Points, Segments & Use Cases

PRODUCT	MARKET	PREREQUISITE	PRIMARY AUDIENCE
infraMetrics Equity	Unlisted infrastructure equity	None	Client-facing and analytical staff

How to use this factsheet

This is the required reading for the infraMetrics Equity product certificate. It is a precise, granular specification of the product: what it is, its exact coverage and index family, the full set of data points it provides, the segmentation available, and its four key use cases. Figures are stated as at SIPA's 2024–2025 product and index factsheets; the programme owner should re-version when SIPA republishes its coverage statistics.

SECTION 1

What the product is

infraMetrics Equity provides market valuations, valuation multiples, expected returns, risk metrics and market indices for the equity of unlisted infrastructure companies (both corporates and single-project vehicles). Because such assets rarely trade, values are not taken from reported appraisals: a transaction-calibrated factor model computes a shadow price for every company in the universe each month, anchored to current private-market conditions and then adjustable for idiosyncratic factors. For any unlisted infrastructure equity investment the product answers three linked questions — its mark-to-market value, its expected return (discount rate), and its risk.

SECTION 2

Coverage at a glance

Characteristic	infraMetrics Equity (as at 2024–2025 factsheets)
Identified universe	9,200+ uniquely identified private infrastructure companies
Actively tracked & priced	800+ companies, valued monthly (financial accounts held since 2000)
Market capitalisation (broad market)	~USD 547bn
Countries	25+ countries of the largest economies (indices span 20+ markets)
Track record	20 years (from the year 2000)
Update frequency	Monthly (mark-to-market)
ESMA-registered indices	23 (infra300, infra100 and infraGreen equity & debt families)
Segment indices	650+ TICCS segment indices
Customisable comparables	400+ segments
Analytics / valuation inputs	60+ index analytics; 40+ valuation metrics
Classification standard	TICCS® (Business Risk, Industrial Activity, Geo-economic, Corporate Structure)

By geography the broad market is weighted toward the United Kingdom (largest), followed by Australia; Europe represents roughly 70% of the universe and Asia approximately 10%.

SECTION 3

Principal equity indices

The infra300 is the flagship broad-market index; the infra100 and infraGreen families are thematic indices representing different strategies. All are ESMA-recognised and managed by an Index Committee.

Index	Definition	Sect ors	Countr ies	Mkt cap	Start
infra300	Matches the TICCS allocations (business model, industrial activity, corporate structure) of the global unlisted infrastructure equity universe	27	20	USD 341.7bn	Mar 2000
infra100 Global	The largest unlisted infrastructure companies in the global universe	22	12	USD 304.85bn	Mar 2005
infra100 (Core, Core+, Project Finance, Euro)	The 100 largest equity investments by strategy style, across 20+ markets	—	20+	—	—
infraGreen	Renewable (wind and solar) companies; tracks 100 investments	—	13	USD 20.26bn	Mar 2010

Each index is available under two weighting schemes — equal-weighted and capped-weighted — and in USD, EUR, GBP, JPY, CAD, AUD and local currencies.

SECTION 4

Market segments

The universe is segmented with TICCIS so that comparables and indices are built like-for-like. The data-segment dimensions available for infraMetrics Equity are:

- **Geography** — 9 regions and 20+ countries.
- **Business model / Business Risk** — 3 classes (Contracted, Merchant, Regulated).
- **Industrial Activity (TICCIS)** — 33 classes (within 8 industrial super-classes).
- **Corporate Structure** — 2 classes (Corporate vs Project Finance).
- **Style** — Value, Core, Core+, Opportunistic and Green.

These combine into 650+ TICCIS segment indices and customisable comparables for 400+ segments and geographies.

SECTION 5

Data points available

Each metric is available per segment and can be customised within its segment to a chosen quintile or user-defined interval matching the risk-factor profile of a target asset. Valuation metrics are reported as percentiles (2.5th, 25th, 50th, 75th, 97.5th) and mean.

5.1 Valuation — income method

- Cost of capital and risk premia; discount rates (expected returns / forward-looking IRR).
- Equity risk premia; WACC.
- Revenue growth; dividend payout ratios; cash-flow benchmarks.

5.2 Valuation — market method (multiples)

- EV/EBITDA; Price-to-Sales; Price-to-Book; EV-to-Sales; Price-to-Earnings.

5.3 Performance and yield

- Year-on-year total return, capital return and income return.
- Cash yield (5- and 10-year moving average).
- Expected returns (forward-looking IRR), by percentile and mean.

5.4 Risk metrics

- Return volatility; 3/5/10-year Sharpe ratio; 3/5/10-year maximum drawdown.
- Value-at-Risk at 97.5% and 99.5%, over 3, 5 and 10 years.
- Duration (and duration-weighted metrics); effective number of constituents; turnover ratio.

5.5 Risk-factor exposures and adjustments. Risk-factor exposures and factor returns are provided for Size, Leverage, Profitability, Investment and Term. Valuation metrics can be adjusted by the following factors:

Risk factor	Basis
Size	Level of total assets

Risk factor	Basis
Investment	Capex-to-assets level
Leverage	Level of senior leverage
Profitability	Return-on-assets level
Remaining life	Time to maturity
Country risk	Term-spread level

5.6 Constituent-level fields. Each market index publishes a constituent list including, but not limited to: unique security identifier, country, TICCS Industrial Subclass, Class and Superclass, TICCS Business Model, and TICCS Corporate Structure.

SECTION 6

How the product is modelled

infraMetrics is a calculated dataset: every company in the universe is valued on each computation date by the same discounted-cash-flow (income) method, consistent with the IFRS 13 exit-price definition. Two models operate in sequence — a cash-flow model that forecasts the dividends accruing to an equity owner, and an asset-pricing (factor) model that sets the discount rate applied to them. The theoretical basis is arbitrage pricing theory (Ross, 1976): expected returns are a linear function of exposures to a small set of priced risk factors.

6.1 Cash-flow model. For each company, four forecasts are produced from the collected accounts (classified by TICCS): a revenue forecast and a total debt-service forecast, each set by analysts and cross-validated; a cash-flow-available-for-debt-service (CFADS) forecast from a statistical model taking revenue and debt service as inputs; and a free-cash-flow-to-equity retention-rate (RR) forecast from a statistical model reflecting future debt service and the company's lifecycle. Expected dividends follow as:

Dividend(t) = FCFE(t) × (1 – RR(t)) = max(0, CFADS(t) – DS(t)) × (1 – RR(t)); shareholder-loan repayments are treated as additional cash flows to the owner.

6.2 Asset-pricing (factor) model and the discount rate. The discount rate applied to those cash flows is the country risk-free term structure (interpolated across maturities) plus an equity risk premium. The premium comes from a factor model of expected returns of the form:

$E(R_i) - R_f = \text{sum over } k \text{ of } [\lambda_k \times \beta(i,k)] + \epsilon_i$ — where λ_k is the market price of factor k (estimated from recent transactions) and $\beta(i,k)$ is company i 's exposure to factor k (read from its financials). Five systematic factors, plus TICCS sector and business-model controls, are used:

Factor	Proxy	Effect	Rationale
Size	Total assets	Negative	Larger assets are more illiquid and complex to transact (Fama & French, 1993)
Leverage	Senior debt / total assets	Negative	Higher leverage raises the risk to shareholders' residual cash flows

Factor	Proxy	Effect	Rationale
Profitability	Return on assets	Positive	Higher profits make future dividends less uncertain (Blanc-Brude & Tan, 2019)
Investment	Capex / total assets	Negative	Higher capex raises cost-overrun and delay risk (Blanc-Brude & Tan, 2019)
Country risk	Term spread (yield-curve slope)	Positive	Macro-financial conditions correlate with infrastructure risk (Chen & Tsang, 2013)

6.3 Calibration, shadow pricing and robustness. The factor premia are re-estimated monthly from 1,200+ historical secondary-market transactions and applied to the observable exposures of the 800+ actively tracked companies to “shadow price” each one — more than 130,000 shadow prices over 25 years. A shadow price captures only the systematic component of value; idiosyncratic, asset-specific factors are added on top when valuing a single asset (this is the “anchoring” step). The model is validated on three counts: predicted prices match observed exit prices closely within each TICCS segment; the pricing residuals are white noise (zero mean, symmetric); and the resulting index Sharpe ratios are economically believable, unlike smoothed appraisal series.

SECTION 7

Key use cases

Strategic asset allocation (SAA) and CMAs. Monthly, unsmoothed expected returns (forward IRR), volatilities, Sharpe ratios, drawdowns, Value-at-Risk and cross-asset correlations feed capital-market assumptions and allocation studies. Because the series are unsmoothed, the risk and correlation inputs are realistic — for example, the infra300’s correlation with government bonds is materially positive, unlike the near-zero figure implied by smoothed appraisal data.

Risk reporting. Value-at-Risk (97.5%/99.5%), volatility, drawdown and duration support prudential reporting, including the Solvency II market-risk and equity-risk modules, with per-segment expected returns and capital-efficiency inputs.

Fund selection. infra300 and matching TICCS style benchmarks are the market reference for measuring the alpha and beta of unlisted infrastructure funds via the Direct Alpha / Private Market Equivalent method (delivered through privateAlpha), letting an LP separate market return from manager skill.

Valuation. Shadow prices, discount rates and multiples give an independent, IFRS-13-aligned mark-to-market for an unlisted infrastructure asset or portfolio, plus a defensible set of comparables across 400+ TICCS segments — tunable to the size, leverage, profitability, investment and remaining-life profile of the specific asset.

SECTION 8

Access

Data, indices and comparables are available through the platform, an Excel add-in and Python/R via the API (the Comps Builder), supporting both point queries and bulk analytics; 60+ index analytics and 40+ valuation inputs are included.

References

Sources

Scientific Infra & Private Assets. infraMetrics market index and comparables factsheets (infra300, infra100, infraGreen; coverage, metrics and robustness). 2024–2025. <https://docs.sipametrics.com/docs>

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Model references

Ross, S. A. (1976). The arbitrage theory of capital asset pricing. *Journal of Economic Theory*, 13(3), 341–360. [https://doi.org/10.1016/0022-0531\(76\)90046-6](https://doi.org/10.1016/0022-0531(76)90046-6)

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