

# EDHEC Infra Days 2023

December 6 & 7, 2023

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Infrastructure is now a key part of many investors' core strategy. The successful emergence of this asset class opens many important questions of risk management for pension plans, insurers or private wealth managers. Beyond the Thames Water debacle in the UK, private asset valuation practices are focusing the attention of regulators from the SEC to the FCA. Meanwhile, in the wake of the LDI crisis, the role of infrastructure investment in asset-liability management remains an open question. Finally, the recent sharp increase in extreme weather events illustrates the imperative to measure and benchmark the climate risks of infrastructure assets.

**EDHEC Infra Days 2023** is the annual conference of the EDHEC Infra & Private Assets Research Institute and will be the opportunity to present the latest research on these key topics and the application of this research in an industry context over two days.

The first day will focus on academic work on the climate, social and financial risks of unlisted equity and private infrastructure debt investments. Many investors remain exposed to a concentrated portfolio of infrastructure assets and these risks can be very material for them, even if they seem low on average in some cases. Better risk measurement is possible thanks to cutting edge research developed at the Institute in 2023. This research provides relevant, conceptual, robust facts and data to the infrastructure investment community.

The second day, infraMetrics day, will be dedicated to our data solutions, applications drawn from the Institute's research. Here again, interaction with the infrastructure investing community will be a core part of the eight workshops devoted to use cases for the financial and extra-financial infrastructure data available on the infraMetrics platform.



# Day 1

## Infrastructure Day – The Imperative of Risk Management

9.00 – 9.10

### Introduction

Speaker:

Frederic Blanc-Brude, Director, *EDHEC Infra & Private Assets*

## Morning Sessions: ESG, From Measurement to Materiality

9.10 – 9.40

### KEYNOTE

#### What Materiality of ESG Risk in Infrastructure Investments?

This opening keynote will focus on the role of ESG regulation and frameworks and whether they can provide useful information to investors in terms of risk. Understanding the materiality, and therefore the relevance, of ESG risks is central to making this information relevant to the investment process. ESG factors can contribute to volatility but may also be considered as drivers of the conditional liabilities of companies, including in regulated disclosures.

- > Single or double: the difference between reporting ESG and measuring materiality
  - > When is ESG information relevant for investors and why?
  - > Risk disclosures: from ESG risk metrics to audited accounts?

Speaker:

Chiara Del Prete, Chair, EFRAG Sustainability Reporting Technical Expert Group, and Chair, International Forum of Accounting Standard Setters

9.40 – 10.40

#### What ESG Risks Really Matter? The Social Acceptability of Infrastructure

This session will introduce brand new EDHEC research on the social acceptability of infrastructure activities and companies and show that material ESG risks can be detected and predicted using non-financial data. In contrast, numerous ESG topics have no predictive power when it comes to materiality. These findings invite a parsimonious, theory-based approach to integrating ESG into investment decisions, rather than relying on a laundry list of redundant indicators.

- > Measuring ESG risk through social acceptability measures
- > The materiality of social acceptability in infrastructure investments
- > Many ESG metrics are white noise, but some have predictive power

Speaker:

Jeanette Orminski, Senior Research Engineer, *EDHEC Infra & Private Assets*

Chair:

Andrew Knight, Global Data and Tech Lead, RICS & Chairman of TICCS Review Committee

Panel:

Ginette Borduas, Head of ESG & Sustainability, *Meridiam*

Simon Whistler, Head, Real Assets, *PRI*

Q&A session with audience

10.40 – 11.00

Break

# Day 1 Infrastructure Day – The Imperative of Risk Management

11.00 – 12.00

## Between a Rock and the Climate: Extreme Climate Risks, -54% or Losing \$600bn

This session presents key findings of the EDHEC research program on climate risk in infrastructure investment: on the one hand, runaway climate change could lead to losses as large as half of the portfolio of some investors because of physical damage, on the other, a delayed transition, even if it achieved decarbonisation, would create a gigantic price and interest rate shock and could wipe out as much as \$600bn of infrastructure asset value for the same investors. The identification and the deliberate mitigation of climate risks in the portfolio rest on the use of the correct classification of assets by TICC taxonomy class to better diversify or exclude certain asset types.

- > How physical risk could lead to large losses in some portfolios before 2050
  - > The large costs of a delayed transition for infrastructure investors
  - > Why measuring climate risks today allows managing them tomorrow

### Chair:

**Darwin Marcelo**, Project Director, *EDHEC Infra & Private Assets*

### Panel:

**Diana Budiono**, Senior Financial and Impact Risk Manager, *Triodos Investment Management*  
**Matthew Jordan-Tank**, Director, Sustainable Infrastructure Policy & Project Preparation, *EBRD*  
**Declan O'Brien**, Executive Director, Energy and Transport Transition Investments, *UBS*  
**Carlos Sanchez**, Senior Director, Climate Resilient Investment, *WTW*  
**Julien Touati**, CEO, *REED Management*  
Q&A session with audience

12.00 – 12.45

## Climate Risk Measurement in Infrastructure

This session presents groundbreaking work on measuring climate risks at the asset level using a combination of models to estimate emissions, exposure to physical risk, and the valuation of climate risks in different climate scenarios. It highlights the importance of models to improve observable or reported data that suffers from a range of methodological short-comings and inconsistencies. All reported emission data is the output of the model. Thanks to a large dataset and the correct methodology, better climate data can be created that is homogenous across the assets in the portfolio.

- > Transition risk: the importance of robust emission estimates
  - > Physical risk: the imperative of granularity
- > Climate scenarios and asset pricing: measuring climate risks in dollars

### Speaker:

**Darwin Marcelo**, Project Director, *EDHEC Infra & Private Assets*  
Q&A session with audience

12.45 – 2.00

Lunch



# Day 1

## Infrastructure Day – The Imperative of Risk Management

### Afternoon Sessions: Measuring Financial Risks to Better Manage Them

The afternoon focuses on measuring risk and volatility in the value and returns of infrastructure investments and shows how this data is necessary for infrastructure to achieve its full potential in the portfolio.

2.00 – 2.15

#### KEYNOTE

### Decoding Risk and Returns: Measuring Alpha in Private Infrastructure Investments

Investments in private infrastructure are often intermediated by private funds. For prospective investors in these structures, it is imperative to assess the quality of their fund managers. This session will explain how the Direct Alpha Method can be used to dissect manager returns into systematic components driven by corresponding risks, as well as actual manager performance: Alpha. Any such decoding requires granular and accurate benchmarks and we will showcase our approach, utilizing EDHECinfra data for these purposes.

#### Speaker:

Ralph Eissler, Principal, Ares Quantitative Research Group, *Ares Management*

2.15 – 3.00

### How Diversified is your Infrastructure Portfolio?

This session focuses on a research paper that is published using monthly data and updated capital market assumptions. It shows that once the correlations are better known the role of infrastructure in the portfolio is clarified.

- > Common risk factors across infrastructure segments
- > How many investments are needed to achieve diversification?
- > Diversifying the total portfolio – can infrastructure help?

#### Speaker:

Frederic Blanc-Brude, Director, *EDHEC Infra & Private Assets*

#### Chair:

François Bergère, Executive Director, *LTIA*  
Q&A session with audience

3.00 – 3.45

### Measuring Risk in Infrastructure Investments

Infrastructure is often presented as low risk but this can lead to misinterpreting the nature of these investments and how they may truly benefit investors. This session discusses the importance of measuring the volatility of infrastructure investments correctly to understand and benefit from their risk-adjusted profile.

Using high-frequency data, it analyses the difference between multiple asset classes and the broad infrastructure market and shows that only when measuring the market volatility of infrastructure can the genuinely defensive qualities of the asset class be understood and used to the benefit of investors.

- > Not so boring: the risks of infrastructure investments
- > Defensive by nature: the drawdown of infrastructure assets in bad times
- > Correlated or not? The time varying nature of the infrastructure risk premia

#### Speaker:

Frederic Blanc-Brude, Director, *EDHEC Infra & Private Assets*

#### Chair:

Avi Turetsky, Partner, Head of Ares Quantitative Research Group, *Ares Management*

#### Panel:

Florence Carasse, Head of Infrastructure Debt, *Pension Insurance Corporation*

Gianluca Minella, Infrastructure Portfolio Strategy & Research Lead, *ADIA*

Ahmed Mubashir, Managing Director, Head of Infrastructure Europe & Asia, *AIMCo*

Tania Tsoneva, Senior Director, *CBRE*

Amarik Ubhi, Partner, Global Head of Infrastructure, *Mercer Alternatives*

Gerald Wu, Deputy Portfolio Manager, *LPPI*

Q&A session with audience

3.45 – 4.00

Break

4.00 – 5.00

**Infrastructure as an investment solution**

This session will discuss the role of infrastructure investments in institutional investors' portfolios. The presentation highlights the many qualities of infrastructure as a contributor to investment solutions, on both asset and liability sides. The speaker will discuss the role of infrastructure as a contributor to ALM and LDI strategies but also the importance of transparent valuations and risk data to achieve these benefits.

- > The characteristics of the infrastructure asset class
- > The liability-friendliness of infrastructure and usefulness in a ALM context
- > The role of data and transparency for investors to truly benefit from the asset class

**Speaker:**

Pierre Guillemin, CEO and Founder, *Prospective Valley SA*

**Chair:**

Jonathan Crowther, Head of LDI, *Mercer*

**Panel:**

Lars Koehler, Executive Director, *Mount Street Portfolio Advisors*

Thomas Liaudet, Partner, Global Head of GP Capital Advisory, *Campbell Lutyens*

Bruce Phelps, Managing Director, Institutional Advisory & Solutions, *PGIM*

Marija Simpraga, Infrastructure Strategist, *Legal & General Investment Management*

Jegor Tokarevich, CEO, *SOF*

5.00 – 6.00

**Lessons from the Thames Water Fiasco**

This session will present a new paper on the fundamental reasons for the Thames Water fiasco of 2023 and the perils for investors to enter an asset class like infrastructure without data about the risks and fair market value of such assets. It examines the triple failure of cost of capital regulation, appraisals, and uninformed investors who could not measure risk clearly.

- > How tariff regulation sent the wrong message to investors
- > Safe and boring: myopic appraisals
- > How investment structuring turned a water utility into a high-risk bet

**Interview with authors:**

Katie Martin, Market's Editor, *FT*

Frederic Blanc-Brude, Director, *EDHEC Infra & Private Assets*

Tim Whittaker, Research Director, *EDHEC Infra & Private Assets*

6.00

Cocktail Reception



# Day 2 infraMetrics Day

	STREAM A EQUITY & DEBT	STREAM B ESG
09.00 – 10.30	<b>Workshop 1</b> Indices & Benchmarks	<b>Workshop 4</b> Climate Impact and Risk Data in infraMetrics
10.30 – 11.00	Break	
11.00 – 12.30	<b>Workshop 2</b> Valuation Tools for Infrastructure Equity Investments	<b>Workshop 5</b> TCFD Reporting and Beyond
12.30 – 2.00	Lunch	
2.00 – 3.30	<b>Workshop 3</b> infraMetrics for Debt Investors	<b>Workshop 6</b> Measuring Social Risks in Infrastructure

## Workshop 1

### Indices and Benchmarks

As the asset class has grown, it has become essential for direct investors, GPs and LPs to understand the dynamics of the market for unlisted infrastructure. Are valuations going up or down? Most investors are aware of where the market was 12 to 18 months ago, but often lack a contemporaneous view that would give them a forward-looking view of their investment case for infrastructure. Will infrastructure be replaced by bonds now that yields are durably higher? These questions and many more cannot be answered without representative market indices and benchmarks that capture market dynamics. Meanwhile, long term strategy benchmarks that look beyond the rate cycle can also be built for investors who want to hold infrastructure investments in perpetuity or to maturity. This workshop will present the indices and benchmark product of the infraMetrics platform and include use cases including:

- > Capturing market dynamics with ESMA-regulated indices
- > Customised portfolio and strategy benchmarks using TICCS
- > Long-term Strategy Indices: investing across the cycle

#### Speakers:

**Frederic Blanc-Brude**, Director, *EDHEC Infra & Private Assets*

**Abhishek Gupta**, Associate Director - Solutions, *EDHEC Infra & Private Assets*

Roundtable: use cases and industry applications of infraMetrics indices and benchmarks

## Workshop 2

### Valuation Tools for Infrastructure Equity Investments

As infrastructure becomes a larger and more omnipresent asset class, the requirement to have good data for frequent valuations increases all the time. Whether it is to transact in the secondary fund market, value pension rights or buyouts in DB funds and member investment choices in DC funds, for prudential and fiduciary reasons, the accurate and mark to market valuation of infrastructure equity investments is increasingly sensitive. The valuation tools of the infraMetrics platform allow building valuation metrics using the market method or the income method by granular segment and to customise them by asset-level risk factor exposures like leverage, size or profits and country. These valuation metrics are computed using large samples and a representative selection of assets, allowing users to access robust, yet granular data to build their own comps or benchmark acquisition or exit values. This workshop will present the unlisted infrastructure equity valuation tools of the infraMetrics platform including the following topics:

- > What factors predict the market price of infrastructure companies
  - > Customising valuations: granular yet robust comparables
  - > Benchmarking cash flow forecasts with infraMetrics

#### Speaker:

**Abhishek Gupta**, Associate Director - Solutions, *EDHEC Infra & Private Assets*

Roundtable: use cases and industry applications of infraMetrics valuation tools

# Day 2 infraMetrics Day

## Workshop 3

### infraMetrics for Debt Investors

Infrastructure debt has become a very attractive asset class and the opportunity for investors to get a different kind of exposure to infrastructure. However, the opacity of origination practices and the virtual absence of secondaries create valuation challenges for investors. This workshop will present the private debt indices, and debt valuation analytics product of the infraMetrics platform and focus on the following use cases.

- > The perils of using the wrong inputs to value private infrastructure debt
- > Credit spread dynamics: from patchy data to robust estimates of the market
- > Measuring the performance of the asset class against IG corporate bonds

#### Speaker:

**Riazul Islam**, Senior Researcher in Finance, *EDHEC Infra & Private Assets*

Roundtable: use cases and industry applications of infraMetrics credit spread proxying and benchmarking tools

## Workshop 4

### Climate Impact and Risk Data in infraMetrics

The climate and impacts and risks of infrastructure assets are a key point of focus but investors often lack the full picture of their level of impact or exposure to climate risks. While GPs or LPs may have carbon emission estimates for their own assets, they are not necessarily the result of a consistent model and cannot be compared to an industry average to understand the extent of the transition risk exposure. Likewise, physical risk estimates are often simplified to a 'point on a map' estimation and do not take into account the granularity of the terrain or the type of damage that different hazards can cause to an asset. Finally, climate data about today's transition and physical risks are not very useful without a forward-looking view and a forward-looking value of these risks. This workshop will present the climate impact and risk metrics of the infraMetrics platform, including:

- > The importance of improving data quality with emission models
- > Benchmarking the climate impacts and risks of portfolios and strategies
- > Building climate impact and risk proxies (Comps) for individual assets

#### Speaker:

**Darwin Marcelo**, Project Director, *EDHEC Infra & Private Assets*

Roundtable: use cases and industry applications of infraMetrics climate data

## Workshop 5

### TCFD Reporting and Beyond - A Customised Analysis of the Climate Risk of an Infrastructure Portfolio

Investors all need to report for TCFD by 2025 at the latest, but they seldom feel comfortable with the estimates of climate risk and impact that they have access to, including scenario-based valuations of infrastructure assets and benchmarks of their exposures to climate risks. With data from the investor's portfolio about risk profile and the location of each asset, infraMetrics can be used to produce a dedicated report that covers the key metrics needed for TCFD at the asset, fund and portfolio levels. This information also allows investors to begin to manage the risks created by climate change for infrastructure investors, including the possibility of being unknowingly concentrated in highly exposed assets in some scenarios. This workshop will present the infraMetrics climate impact and risk estimation service, including:

- > Service output and inputs from the investor
- > Asset-level estimates of climate risk at the 2050 horizon
- > Fund and portfolio level climate risk estimates and benchmarks

#### Speakers:

**Frederic Blanc-Brude**, Director, *EDHEC Infra & Private Assets*

**Darwin Marcelo**, Project Director, *EDHEC Infra & Private Assets*

Roundtable: use cases and industry applications of infraMetrics climate data estimation service



# Day 2 infraMetrics Day

## Workshop 6

### Measuring Social Impacts and Risks for Infrastructure Investments

Infrastructure projects impact people and the environment, and in return, societies react with various (financial) consequences. TCFD already requires companies to measure reputational risks, and several working groups and task forces are bringing the discourse on social factors to the table. Infrastructure assets and investments can't ignore social risks any longer!

This workshop will provide more details of the methodology behind our research on social acceptance. Our main aim for the workshop is to provide a platform for regulators, investment managers, asset owners, and other interested parties to discuss the impact of social factors on infrastructure assets and investments.

We will highlight how we study social impact and risk, measure social acceptance, and provide data for (material) social risk reporting, and discuss with participants social risk measurement and reporting in the ESG context:

- What non-financial measures could indicate (material) social risk?
  - What data does the market need to report on the S in ESG?
- What are the most relevant factors that are material risk factors for the infrastructure sector?

#### Speaker:

**Jeanette Orminski**, Senior Sustainability & ESG Researcher, *EDHEC Infra & Private Assets*

# Our Speakers



**Frederic Blanc-Brude**, Director, *EDHECinfra* and CEO, *Scientific Infra Pte Ltd*

He joined EDHEC in 2012 after 10 years of private sector experience in the infrastructure finance field, and direct involvement in more than USD6bn of transactions. His research work focuses on asset pricing applied to highly illiquid assets and the stochastic modelling of cash flows in infrastructure projects. He has published papers in economics and finance journals, recently co-authored a book on the valuation of unlisted infrastructure equity and debt investments and is a regular contributor to the press. He is a member of the editorial board of the Journal of Alternative Investments. He holds a PhD in Finance (King's College London) and degrees from the London School of Economics, the Sorbonne, and Sciences Po Paris. He is a regular contributor to the G20 working group on long-term infrastructure investment, has advised the European Occupational Pensions and Insurance Authority on the prudential treatment of infrastructure investments and also represents EDHEC on the Advisory Board of the Global Infrastructure Facility of the World Bank.



**Pierre Guillemain**, CEO & founder, *PROSPECTIVE VALLEY SA*

Pierre is the CEO and founder of PROSPECTIVE VALLEY SA, a wealth management company based in Lausanne Switzerland. As such he is directly involved in managing the company's clients' portfolios. He has more than 35 years of experience in asset management in all traditional asset classes (equities, bonds, currencies) and alternative asset classes investments (hedge funds, private equity, infrastructure, real estate, commodities) for individuals as well as for corporations and institutions. He has received numerous awards as a portfolio manager: Lipper Europe, Lipper Switzerland, Lipper France, Corbeilles de la Gestion, Fund Class, Le Revenu, Agefi, Geld Magazin. Since April 2016, he is a member of the Investment Committee of the «State of Fribourg – Switzerland (CPPEF) Pension Fund» and is an adjunct professor for the Asset Management course in the Bachelor's program at HEC Lausanne.



**Abhishek Gupta**, Associate Director – Solutions, *EDHECinfra*

Abhishek is an Associate Director at the EDHEC Infrastructure Institute and the Head of infraMetrics® Product Development. He has more than 10 years of experience in asset management and alternative investments including stints at Goldman Sachs and Partners Group. He holds a Masters of Science in Financial Engineering from Nanyang Business School and a Bachelor of Technology from the Indian Institute of Technology. Ten years in alternative investment research. Partners Group & Goldman Sachs alumnus.



**Riazul Islam**, Senior Researcher in Finance, *EDHECinfra*

Riazul is a private debt specialist responsible for the debt pricing and risk models in infrastructure companies. He designs and develops new analytics and indices and builds practical use cases of the infraMetrics® products which are relevant for investors, valuers and regulators. He also writes white papers and short articles focusing on the latest relevant topics in private debt investments. He is passionate about Investment management, risk analysis, benchmarking, data insights and completed a degree in financial management. He holds a Master in Finance from the University of Neuchatel, Switzerland, where he specialised in finance. He has previously worked at JP Morgan, DE Shaw, Franklin Templeton, Mpower Financing in the Credit risk, Financial research, Portfolio monitoring department.



**Darwin Marcelo**, Project Director, Green Infrastructure Team, *EDHECinfra*

During Darwin's stint with the World Bank Singapore office, he was the Program Manager of the World Bank Quality Infrastructure Investment (QII) Partnership and Lead of the Global Infrastructure Connectivity Alliance (GICA). He was also part of an infrastructure analytical team that advised governments globally on how to plan and invest in infrastructure to maximize economic, social, and environmental impact. He specialised in the development of tools to improve governments' infrastructure investment and planning processes, as well as the assessment of impacts and performance of infrastructure projects. Darwin had also developed the World Bank Infrastructure Prioritization Framework (IPF), a tool piloted in several countries to assist governments to prioritize infrastructure investments.



**Jeannette Orminski**, Senior Research Engineer, *EDHECinfra*

Jeannette received her PhD degree from the Nanyang Technological University, Singapore in Communication Science; focusing on the sustainability discourse on Twitter. Jeannette applied network analysis and machine learning approaches to identify opinion leaders and thought leaders in online social networks. Prior to joining EDHECinfra, she worked as a Data Scientist at the Munich Science Communication Lab analysing the topic of Planetary Health.

# Our Speakers



**Tim Whittaker**, Research Director – Head of Data, *EDHECinfra*

He was awarded his PhD in Finance from Griffith University in 2013. His research interests are infrastructure finance, public private partnerships and asset pricing. Prior to completing his PhD he worked for five years as a corporate finance analyst in Australia. In addition, Tim holds a Master of Business (Financial Management) from Queensland University of Technology and a Bachelors of Economics and Commerce from the University of Queensland. He leads our team of financial analysts. 15 years in infrastructure investment research. EDHEC-Risk, QUT & Deloitte alumnus.

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EDHEC Infra & Private Assets Research Institute is a research centre of the EDHEC Business School. It was created in 2016 to spearhead new research in the asset pricing and credit risk of private infrastructure investments. Since then it has also developed ground breaking research in the area of climate risk, social acceptability measurements for private assets.

Through our corporate entity, Scientific Infra and Private Assets Ltd, we are also an ESMA-regulated provider of market indices, benchmarks and valuation analytics for investors in unlisted infrastructure equity and private debt, including the widely used *infra300*<sup>®</sup> index. We maintain the *infraMetrics*<sup>®</sup> platform, which was launched in 2020 to provide updated, robust and granular data to investors representing USD400bn of infrastructure AUM.

In 2020, we launched a major new project on the measurement and benchmarking of climate risks and the social acceptability of infrastructure investments. After three years of development, several key research results a major data collection effort, we now publish climate and social risk data in *infraMetrics*<sup>®</sup>, alongside our indices and analytics since Q1 2023.

Having achieved market recognition for infrastructure investment benchmarks, we also renamed the EDHEC Infrastructure Institute to become the EDHEC Infrastructure & Private Assets Institute to reflect a new ambition for our research, with a new focus on private equity and debt. We will launch *privateMetrics*<sup>®</sup>, a new platform in 2023 providing asset valuation tools and market indices for investments in private companies worldwide.

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