

Global Climate Risk for Corporates & Sovereigns

Physical risk and transition risk data & analytics

ICE Climate Risk data can help companies and financial institutions assess and quantify climate Value-at-Risk, Revenue Impairment, and conduct stress tests on portfolios and loanbooks.

Overview

Physical risk metrics are derived using the latest climate models and natural catastrophe frameworks to identify the exposure and vulnerability of corporate assets across the globe to climate-related hazards, both acute (coastal, pluvial, and fluvial flooding, hurricane wind, and wildfire), and chronic (extreme temperatures and water stress). The model incorporates the underlying property level risk exposure for over 1.6 billion buildings to create a high resolution global gridded dataset of annual loss ratios, or Value-at-Risk (VaR) metrics expressed as a percentage of total property value and revenue.

Transition risk data provides a comprehensive time series (from 2010) of Greenhouse Gas (GHG) Protocol defined Scope 1, 2 and 3 emissions covering both reported and modeled data for companies. GHG Emissions Reduction Targets Data incorporates reported company targets (extending to the year 2100), including Absolute (Net-Zero and Carbon Neutrality) and Intensity targets, as well as targets aligned with the Science-Based Targets Initiative (SBTi) temperature scoring methodology.

Climate Value-at-Risk metrics to assess both the physical and transition risks of a company or portfolio. The metric utilizes a climate-financial model to calculate the potential financial risks of a company, under various climate scenarios. Clients can apply custom financial assumptions to produce tailored climate VaR metrics, if desired. Available for corporates & sovereigns.

Coverage

Physical risk*

- Risk exposure for over 1.6 billion global buildings covering all sectors and asset classes
- 3 million corporate asset locations, across 20,000+ public companies
- Over 9 million locations for more than 5 million private companies
- Location based physical risk coverage can be expanded (using client inputs such as latitude, longitude and sector) for private assets to help meet client requirements on a bespoke basis
- Sovereign physical risk coverage for 170+ debt issuing countries/territories

Transition risk*

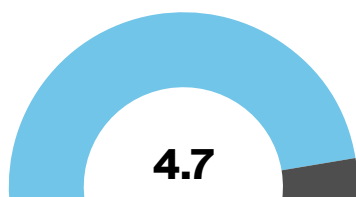
- 12,000+ global companies directly analyzed for publicly reported emissions data
- Modeled data for 30,000+ public and private companies using statistical models based on a quality assured dataset of analyzed companies
- 46,000+ reported Emissions Reduction Targets, across ~6,900+ global companies
- Coverage can be expanded (using client inputs such as revenue, sector, country) to private companies, unlisted securities, and small and medium enterprises (SMEs) to help meet client requirements on a bespoke basis
- Sovereign emission coverage for 170+ debt issuing countries/territories

*Coverage as of March 2025

Key features

Physical risk

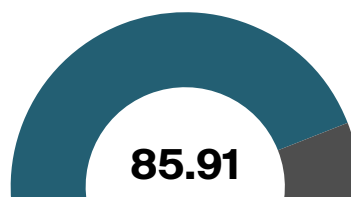
- Acute hazards including flood (coastal, pluvial, fluvial), hurricane wind and wildfire
- Chronic hazards (extreme heat and cold, water stress, worker productivity)
- VaR metrics including Property, Revenue, Gross Domestic Product (GDP) and worker productivity
- Point-in-time exposure in 5-year increments from 2020 to 2060
- VaR metrics at the annual average loss, and for 100-, 200- and 500-year return periods
- Climate scenario analysis using three distinct Shared Socioeconomic Pathways (SSPs)
- Physical Risk Scores quantify physical climate risk exposure



Physical Risk Scores

Transition risk

- Scope 1, 2 & 3 (all 15 categories) emissions and emissions intensity
- Avoided emissions
- GHG Emissions Reduction Targets, including SBTi-verified
- Implied Temperature Rise (ITR) Score & SBTi Temperature Score
- Transition-related metrics such as Historical Performance, Target Coverage, and On-track with Targets
- Net-Zero analysis using a range of leading climate scenario databases, with emissions pathways and forward-looking projections
- Transition Risk Score measure a company's alignment with transition towards a low-carbon economy by assessing current, historical and forward-looking performance



Transition Risk Scores

Use cases

Climate risk data

Reporting and disclosure

- Investors can use climate risk data to provide detailed disclosures on portfolios, including climate risk exposures, mitigation strategies and alignment of investments with climate goals
- Responding to mandatory and voluntary reporting requirements (e.g., Task Force on Climate-Related Financial Disclosures (TCFD) / International Sustainability Standards Board (ISSB), Corporate Sustainability Reporting Directive (CSRD), and other regional disclosure requirements)

Risk management and tailoring investment strategies

- Use of climate risk data to assess portfolio exposure and quantify impacts of investments across acute, chronic and transition climate risks
- Risk metrics such as Climate VaR to measure a company or portfolio's financial impacts related to climate risk
- Analyze the impact of climate hazards on the creditworthiness of issuers and adjust lending terms of investment criteria accordingly
- Integrate asset location data with climate risk overlays to refine financial models and adjust risk premiums
- Use of climate risk data to enable portfolio tilts or customization (e.g., underweight companies with high flood risk exposure and/or companies with no decarbonization commitments)

Climate stress testing and scenario analysis

Conduct stress testing and scenario analysis based on forward-looking climate risk projections:

- Simulation of climate-related scenarios across SSPs up to 2060
- Projection of future GHG emissions of private and listed companies until 2100, incorporating Network for Greening the Financial System (NGFS), Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA) climate scenarios

Corporate engagement

- Identify corporate issuers or sectors that face heightened exposure to extreme weather events
- Engage with companies on climate resilience and risk mitigation planning
- Understand and evaluate transition plans and Net Zero commitments of the company and business strategy, including utilization of temperature scores to encourage corporates to set more ambitious carbon reduction targets

Delivery

Climate risk (physical risk and transition risk) datasets can be delivered through flat file and more. The data is also available at the company, portfolio, and sector level via the ICE Climate Analytics Platform (ICE CAP).



For more information on Physical Risk data: ice.com/climate-physical-risk-data

For more information on Transition Risk data: ice.com/ICE_Sustainable_Finance_Emissions_Targets_Data.pdf

For more information: ice.com/climate

Contact us today to schedule a demo: climaterisk@ice.com

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