Scenario Analysis for Physical Climate Risks

New report from Four Twenty Seven outlines the scientific foundation of scenario analysis for physical climate risks

December 4, 2019 – Berkeley, CA – Four Twenty Seven, an affiliate of Moody's and the leading publisher of climate data for financial markets, today released a report outlining an approach to performing scenario analysis for physical climate risks for financial stakeholders. Quantifying climate risks under different scenarios is an essential, yet challenging part of understanding and preparing for physical climate risks.

Scenario analysis is often approached from the perspective of transition risk, where policy developments and greenhouse gas emission targets are the key determinants of the magnitude of risk in the next 10 to 30 years. However, physical climate impacts over the coming decades are largely locked in. Just like a rapidly moving vehicle does not stop immediately when brakes are applied, our atmosphere will continue to warm for many decades even if we stop emitting carbon dioxide tomorrow. The oceans will continue to rise, heat waves will become more severe and droughts will intensify. For example, the most water stressed areas are anticipated to experience reductions in dry season rainfall equivalent to the two decades surrounding the American dust bowl.

When focusing on the near term, modeling the warming and related impacts we have already committed to calls for physical climate risk scenarios that are decoupled from economic and policy activities and instead focus on scientific phenomenon driving uncertainty in the coming decades. This report explains percentile-based analysis, which groups the outputs of climate models based on their severity to explore the range of outcomes in the next several decades.

"This flexible and data-driven approach to running scenario analysis for physical risks can inform portfolio-level screening, reporting and engagement around physical climate risk assessment and management," says Nik Steinberg, Four Twenty Seven's Director of Analytics. "Four Twenty Seven is working toward implementing real-world analysis utilizing this framework at scale."

A full copy of the report can be found via this link.

The authors of the report are available for interviews and to answer any relevant questions.

ABOUT FOUR TWENTY SEVEN:

Four Twenty Seven (427mt.com), an affiliate of Moody's, is a publisher and provider of data, market intelligence and analysis related to physical climate and environmental risks. We tackle physical risk head on by identifying the locations of corporate production and retail sites around the world and their exposure to climate change hazards such as sea level rise, droughts, floods and tropical storms, which pose an immediate threat to investment portfolios.

Four Twenty Seven's ever-growing database now includes one million corporate sites and covers over 2000 publicly-traded companies. We offer on-demand analytics and data products to access this unique dataset. Options include data licenses, an interactive analytics platform, and company scorecards, as well as reporting services, scenario analysis, and real asset portfolio risk assessments.

Four Twenty Seven has won multiple awards for its innovative work on climate risk and resilience and our work has been featured by Bloomberg, the Financial Times and the UNFCCC. Four Twenty Seven was founded in 2012 and is headquartered in Berkeley, California with offices in Washington, DC, Paris, France and Tokyo, Japan.

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