Climate Risk Assessment of a Large-sized Credit Portfolio

Florian Bourgey*[1]

[1]Bloomberg L.P. – United States

Abstract

We examine climate-related exposure within a large-sized credit portfolio, encompassing both transition and physical risks. Our primary emphasis lies in understanding how climate risks affect the portfolio's credit risk. We explore various mitigation scenarios, potential policy interventions, and risk factors to elucidate effective emission strategies and the corresponding value dynamics of the constituent firms. The interdependence among default events is delineated using a Gaussian factor model framework. We combine dimension-reduction techniques with a polynomial chaos expansion to analyze the cumulative loss distribution to ensure computational efficiency.

Keywords: Climate Risks, Credit Risk, Credit Portfolio, Polynomial Chaos Expansion

*Speaker