

A climate scenario analysis for the European SME lending market based on the NGFS projections

Raffaella Calabrese

University of Edinburgh Business School
29 Buccleuch Pl, Edinburgh EH8 9JS
United Kingdom

Joint work with: Luca Zanin (Prometeia)

Assessing forward-looking climate risk materiality for Small and Medium Enterprises (SMEs) loan portfolios can be challenging due to firms' poor informative disclosure on environmental matters and uncertainty in climate policies. To fill this gap, we suggest to use climate mitigation scenarios. We analyse a comprehensive dataset on 3.9 million loans to SMEs from 2013 to 2022 for three European countries (Belgium, Italy, and Portugal). We consider a survival approach with macroeconomic variables to estimate the SME probability of default. We then project the macroeconomic variables under the mitigation scenarios provided by the Network for Greening the Financial System (NGFS) with a time horizon up to 2050. Climate risks increase the projected SME default probabilities in the short term, especially under a delayed transition and a Fragmented World scenario. In the long run, the transition under a Net Zero 2050 scenario brings co-benefits regarding a lower default probability than under a delayed transition scenario or a Fragmented World scenario. Projections also suggest that insufficient climate policies to mitigate global warming can negatively impact loan portfolios through the damages from physical risk.