
On Fairness of Systemic Risk Measures

Francesca Biagini , Jean-Pierre Fouque^{*1}, Marco Frittelli , and Thilo Meyer-Brandis

¹University of California, Santa Barbara – United States

Abstract

In our previous paper "A Unified Approach to Systemic Risk Measures via Acceptance Set" (*Mathematical Finance 2018*), we have introduced a general class of systemic risk measures that allow random allocations to individual banks before aggregation of their risks. In the present paper, we address the question of fairness of these allocations and propose a fair allocation of the total risk to individual banks. We show that the dual formulation of the minimization problem identifying the systemic risk measure provides a valuation of the random allocations, which is fair both from the point of view of the society/regulator and from the individual financial institutions. The case with exponential utilities which allows for explicit computation is treated in details.

^{*}Speaker