"The Co-CoVaR and some other Fair Systemic Risk Measures with Model Risk Corrections"☆

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PRELIMINARY VERSION

Abstract

This paper first highlights how fragile are the main measures of systemic risk of financial institutions and, secondly, proposes a simple correction to address this drawback linked to model errors of such measures. We show that main quantitative systemic risk measures are indeed very linked to extreme quantiles and that the ranking in terms of systemic risk importance highly depends upon the adopted measure, and, finally, that systemic risk measures are very sensitive to measurement errors. Following the approach of Boucher *et al.* (2013), we then propose a model risk correction to stabilize and reconciliate main systemic risk firm rankings. Our results finally suggest that the riskiness of risk measures is crucial for the sake of the fairness and the global financial system stability.

Keywords: Systemic Risk Measures, Model Risk, Expected Shortfall, Value-at-Risk.
J.E.L. Classification: C31, C52, G32.

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1. Introduction

Following the experience of the recent 2007-2009 financial crisis, a special attention has been paid to the "macroprudential" regulation, *i.e.* the prevention of a financial system-wide

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