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Title: "New results on hedge fund risks by polymodel analysis"

Abstract

Polymodels are a statistical analysis technique for dynamic objects evolving within an environment, which is dynamic as well. Both the object and the environment are described by time series. In a financial context, the object is an asset, a fund, a portfolio, anything that can represent an investment, while the environment is made of variables or "factors" that describe the state of the market. Polymodels provide the individual response of the object to every single variable of the environment, together with a reliability score. These response functions being nonlinear, the fragility/antifragility properties of the object can be evaluated.

We will show how to estimate polymodels and to use them for asset selection, risk assessment and portfolio construction, as well as recent research on the risk of hedge funds. Our focus is the fragilities of those prone to blow up at the time of crisis, despite impeccable track record.