



Subject: Model risk measures for multi-asset European products

We are looking for original methods to estimate model risk for multi-asset, European derivatives: we will study the case of a product paying $Z = f(X(T), Y(T))$ where X and Y are two assets with known distributions, in a market where a certain level of information is also available on the prices of some multi-asset payoffs, such as options on the spread $X-Y$ (as for CMS rates) or on the ratio X/Y (as for FX rates); we can either assume the whole distribution of the spread/ratio is known, or only the prices for a few, given strikes.

The target will be to suggest a methodology providing the interval of prices for the product Z which are compatible with the available market information, and eventually refine our analysis to the case where the market information is not provided as exact prices but as a distribution of priors.

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