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A VaR Black–Litterman model for the construction of absolute return fund-of-funds

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Abstract

The objective is to construct fund-of-funds (FoFs) that follow an absolute return strategy and meet the requirements imposed by the value-at-risk (VaR) market risk measure. We propose the VaR Black–Litterman model which accounts for the VaR and trading (diversification, buy-in threshold, liquidity, currency) requirements. The model takes the form of a probabilistic integer, non-convex optimization problem. We first derive a deterministic reformulation of the probabilistic problem, which, depending on the informat[...]nt, or a close approxim[...]elaxation of the refor[...]a wide range of pr[...]nd-bound algor[...]e optimal FoF. The[...]their use by a financi[...]ed worldwi[...]echnique is very efficient, outperforming, in terms of both speed and robustness, three state-of-the-art alternative solution methods and solvers.

Keywords: Portfolio optimization Probabilistic programming Funds-of-Funds Black–Litterman Absolute return Trading constraints

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