

RiskPortfolios: Computation of Risk-Based Portfolios in R

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Software

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Summary

RiskPortfolios is an R package (R Core Team (2016)) for constructing risk-based portfolios. It provides a set of functionalities to build mean-variance, minimum variance, inverse-volatility weighted (Leote De Carvalho, Lu, and Moulin (2012)), equal-risk-contribution (Maillard, Roncalli, and Teïletche (2010)), maximum diversification (Choueifat and Coignard (2008)), and risk-efficient (Amenc et al. (2011)) portfolios. Optimization is achieved with the R packages **quadprog** (Weingessel (2013)) and **nloptr** (Ypma (2014)). Long or gross constraints can be added to the optimizer. As risk-based portfolios are mainly based on covariances, the package also provides a large set of covariance matrix estimators. A simulation study relying on the package is described in Ardia et al. (2016). The latest version of the package is available at ‘<https://github.com/ArdiaD/RiskPortfolios>’.

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