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Dynamics and risk factors in hedge funds returns: Implications for portfolio construction and performance evaluation

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Abstract

As conventional asset pricing models have been proven inappropriate to adequately explain hedge fund performance, this study proposes an innovative, flexible and efficient hedge fund multifactor model to explain dynamic risk and return properties of core hedge fund strategies. The proposed model takes into account critical traditional and alternative market factor exposures, incorporates a dynamic variance–covariance framework and is evaluated for its predictive capability. Based on this empirical evidence, a process for optimal hedge fund portfolio construction under the conditional-value-at-risk (CVaR) framework is then developed. The proposed multifactor hedge fund model is concluded to better explain nonlinear hedge fund risk-return properties and to produce superior empirical insight on efficient hedge fund portfolio allocation decisions on selected investment strategies. The widely held reputation of hedge funds delivering superior absolute returns at downward market phases is not empirically justified. At crises times, hedge funds are seen to record a negative performance and even suffer substantial losses.

Keywords

Hedge fund performance; Multifactor models; Dynamic variance–covariance matrix; Optimal hedge fund portfolios