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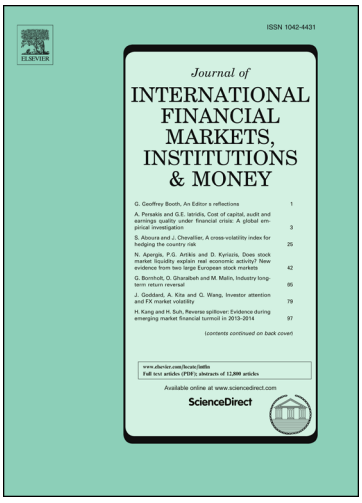

A Systemic Risk Analysis of Islamic Equity Markets using Vine Copula and Delta CoVaR Modeling

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A Systemic Risk Analysis of Islamic Equity Markets using Vine Copula and Delta CoVaR Modeling

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Abstract

We model the downside and upside spillover effects, systemic and tail dependence risks of the DJ World Islamic (DJWI) and DJ World Islamic Financial (DJWIF) indices, and of Islamic equity indices from Japan, USA and the UK. We draw our empirical results and conclusions by implementing a robust modeling framework consisting of Value-at-Risk (VaR), conditional VaR (CoVaR), Delta conditional VaR (ΔCoVaR), canonical vine conditional VaR (c-vine CoVaR), and time-varying and static bivariate and vine copula models. Full sample estimations indicate larger downside spillover effects and systemic risk for the DJ Islamic Financials World and USA Islamic indices, while Islamic indices from Japan and the DJ World financials have greater exposure to upside spillover risk effects. During the financial crisis the USA and UK Islamic indices display higher downside systemic risk; and the strongest negative tail asymmetric dependence occurs between the DJ Islamic Financials World, and the Islamic indices from Japan and the DJ World financials. Implications of the results are discussed.

JEL Classifications: C51; C52; C58; G11; G17
Keywords: Spillovers; Systemic risk; Conditional VaR; Copulas; Tail dependence