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Human and Ecological Risk Assessment: An International Journal ›
Volume 19, 2013 - Issue 5

259 Views | 3 CrossRef citations to date | 0 Altmetric

Special Section: Modeling Sustainable Risk Management

Catastrophe Risk Analysis: A Financial Perspective

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Pages 1372-1384 | Accepted author version posted online: 18 Jun 2013, Published online: 03 Jul 2013

Cite this article https://doi.org/10.1080/10807039.2012.738154

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ABSTRACT

This article examines how catastrophe events affect risk analysis from a financial perspective. Data from different industries such as Advanced Sustainable Performance Indices, gold, energy, real estate, and insurance were collected and analyzed. The performance of these funds was compared by using various financial ratios. Then we tested the stock selecting and market timing abilities. We also assessed whether a particular catastrophe event has affected stock prices by analysis of two event studies, the 9/11 terrorist attacks in the United States and the collapse through bankruptcy of Lehman Brothers. We examined how an asset portfolio performs under catastrophic events and under the situation of adding Advanced Sustainable Performance Indices into an investor's portfolio basket. We found that the 9/11 terrorist attacks affected the Dow Jones Real Estate Index's prices a lot. Lehman Brothers' bankruptcy filing had a

positive impact on the CBOE Gold Index, and had a large impact on the Fidelity US Bond Index. The ASPI Index in our optimization problem gave us better diversification. From our analysis, we conclude that portfolio diversification is a good way to hedge against catastrophic risk.

Key Words:

catastrophe advanced sustainable performance | Sharp ratio | value at risk

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