

# **CLIMATE VARIATIONS, EXTREME WEATHER AND THE MARKET VALUE OF INSURANCE FIRMS**

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## **Abstract**

Climate change is a major current issue within the academic and media realms. At the forefront of the issue, the insurance industry is faced with the challenge of increased risk due to an increase in the variability and severity of extreme weather events. Insurance companies are complaining of rising costs and increased losses, so we should expect to see a pattern between climate variability and the market value of the insurance firms. On the other hand, the increase in weather activity could be increasing the amount of policies sold and may be beneficial to the insurers. Here, we analyze climate change and its impact on the insurance sector to see if there exists a correlation between climate change and market value. By using regression analysis and hypothesis testing on time series data, we determine the impacts of several climate indicators upon the share prices of three major reinsurance firms. We find that the climate indicators as a whole are not significant in explaining or determining the share prices of the insurance firms. Our results provide evidence to arguments explored in our literature review that increasing costs from extreme weather events may be due to socioeconomic factors such as increased development and population size along the shore lines. With the new risks associated with climate change, there are also new opportunities for insurers to take advantage of. From our study, it appears that they are.