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Insurance against weather risk: Use of heating degree-days from non-local stations for weather derivatives

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Theoretical and Applied

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Sensitivity and specificity of the insurance instrument were used to quantify the potential spatial risk basis. Setting indemnification beyond a half standard deviation above the mean meant that between 60% and 76% of the indemnable HDD were classified correctly, while 82% to 99% of the non-indemnable HDD were classified correctly. These results indicate that the spatial risk basis is a major concern and that successful weather derivatives require the utilization of carefully selected weather data obtained from meteorological stations in close proximity to the area being insured.

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