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Managing the financial consequences of weather variability

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Abstract

Cool summers or warm winters affect sales of scores of products of all businesses operating in the 70% of activity sectors that are exposed to weather variability. The renewed interest in investigating the role of weather on business activity is prompted by the development of the weather index-based financial market, fostered by increasing weather variability and more reliable weather data. Drawing on the case of a manufacturer of sunscreen products, we model the influence of weather on sales in a way that supports the implementation of index-based financial cover. We evaluate the maximum potential sales loss caused by adverse weather, construct a weather index-based cover, and demonstrate its effectiveness in reducing sales variability. Knowledge of models that link weather and sales allows analysts and asset managers to better understand the contribution of weather to sales, to anticipate its effects on financial performance, and to implement risk mitigation strategies.

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Appendix

See Tables 7 and 8.

Table 7 Linear regression using both abnormal temperature and absolute precipitation to explain abnormal sales

Table 8 Analysis of variance of the coefficients for CD60

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